

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

---

Public Access Theses and Dissertations from  
the College of Education and Human Sciences

Education and Human Sciences, College of  
(CEHS)

---

11-2011

## Does Being Rural Matter?: The Roles of Rurality, Social Support, and Social Self-Efficacy in First-Year College Student Adjustment

Allison L. Bitz PhD

University of Nebraska-Lincoln, [allisonlbitz@gmail.com](mailto:allisonlbitz@gmail.com)

Follow this and additional works at: <https://digitalcommons.unl.edu/cehsdiss>



Part of the [Counseling Psychology Commons](#), [Higher Education Administration Commons](#), and the [Student Counseling and Personnel Services Commons](#)

---

Bitz, Allison L. PhD, "Does Being Rural Matter?: The Roles of Rurality, Social Support, and Social Self-Efficacy in First-Year College Student Adjustment" (2011). *Public Access Theses and Dissertations from the College of Education and Human Sciences*. 175.  
<https://digitalcommons.unl.edu/cehsdiss/175>

This Article is brought to you for free and open access by the Education and Human Sciences, College of (CEHS) at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Public Access Theses and Dissertations from the College of Education and Human Sciences by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

DOES BEING RURAL MATTER?: THE ROLES OF RURALITY, SOCIAL  
SUPPORT, AND SOCIAL SELF-EFFICACY IN FIRST-YEAR COLLEGE STUDENT  
ADJUSTMENT

by

Allison L. Bitz

A DISSERTATION

Presented to the Faculty of  
The Graduate College at the University of Nebraska  
In Partial Fulfillment of Requirements  
For the Degree of Doctor of Philosophy  
Major: Psychological Studies in Education

Under the Supervision of Professor Michael Scheel

Lincoln, Nebraska

November, 2011

DOES BEING RURAL MATTER?: THE ROLES OF RURALITY, SOCIAL  
SUPPORT, AND SOCIAL SELF-EFFICACY IN FIRST-YEAR COLLEGE STUDENT  
ADJUSTMENT

Allison L. Bitz, PhD

University of Nebraska, 2011

Advisor: Michael J. Scheel

One out of every three first-year college students will not return for a second year of college (Postsecondary Education Opportunity, 2010). Due to a variety of factors, minority students are at an even higher risk of dropping out of college. Rural youth, comprising approximately 22% of the nation's total youth, form a significant minority population; yet the rural student experience in college has not yet been widely considered in research. The purpose of this quantitative study was to explore college adjustment and its predictors among first-year students, with an emphasis on the role of rurality in college adjustment. Social self-efficacy, social support, social investment at college, psychological help-seeking attitudes, and well-being were explored as potential predictors of adjustment. Participants were 240 first-year students at a large Midwestern university, who completed a questionnaire. Results indicated that rural and urban students did not report significant differences in the extent of their adjustment to college; yet, the *predictors* of adjustment were slightly different between groups (i.e., rural and urban students may have different paths to adjustment at college). Social support was an indirect and direct predictor of adjustment for rural students, but only operated as an indirect predictor of adjustment for urban students. Thus it may be that the social support perceived by rural students is somehow qualitatively different than support perceived by

urban students, which may provide evidence for the idea of divergent rural/urban cultures. Bolstering this claim is the finding that rural students reported less positive help-seeking attitudes and higher senses of well-being than did urban students. Also of note is that well-being was found to mediate the relationship between social self-efficacy and adjustment, and between social support and adjustment, across groups. Based on the results of this study, various theoretical and practical applications, including potential interventions for first-year college students, are considered and discussed.

Copyright Page

Copyright 2011, Allison L. Bitz

## Dedication

“To have striven, to have made the effort, to have been true to certain ideals - this alone is  
worth the struggle.” --William Osler

I dedicate this work to all first-year college students, especially those struggling  
with the transition.

## Acknowledgements

There are so many people to thank and so little space with which to thank them. Yet for the sake of parsimony, this will be very brief. I have an exceptional and supportive advisor in Dr. Mike Scheel, who supported and guided this work, and who asked the right questions at the right times. My committee has been so helpful in challenging and encouraging me to craft the best project that I could out of this research idea. I have amazing friends and colleagues who bolstered me along the way with their expertise, curiosity, and enthusiasm. I was fortunate enough to cross paths and share my ideas with numerous personal and professional acquaintances, who in turn lent me their feedback and perspectives; many of these serendipitous meetings shaped the path and outcome of this project. Finally, I started this project knowing that I had the support of my family: Under my feet was the foundation that my parents and grandparents built for me, my spouse and his extended family had my back, and in front of me, pulling me along with their tiny yet insistent hands, were my children, who enabled me to stretch further and keep moving forward even when I thought I could not. Thank you all for being in my life.

## Table of Contents

I.	Chapter 1: Introduction	10
II.	Chapter 2: Overview of Previous Research	34
	College adjustment	35
	Social support and college adjustment	44
	Social self-efficacy and college adjustment	49
	Psychological help-seeking and college adjustment	53
	Social investment and college adjustment	60
	Well-being and college adjustment	64
	Rurality	77
III.	Chapter 3: Methods	86
	Participants	86
	Instrumentation	87
	Procedures	95
	Data analysis	96
	Rationale for structural equation model	98
IV:	Chapter 4: Results	103
	Data checking and cleaning	103
	Reliability	104
	Descriptive statistics and preliminary bivariate analyses	105
	Analyses of research questions and hypotheses	106
	Post-hoc analyses	114
V:	Chapter 5: Discussion	116
	Rurality: Does it matter?	116
	Convergence/Divergence from previous literature	125
	Practical implications	133



Limitations	137
Future directions	151
References	157
Tables	183
Figures	188
Appendix A: Informed consent document	190

## Multimedia Objects

Table i: Comparison of social variables, p. 183

Table 1: Means and standard deviations, p. 184

Table 2: Pearson's correlations, constructs of interest, p. 184

Table 3: Pearson's correlations, subjective and objective definitions of rurality, p. 184

Table 4: Pearson's correlations, rurality and constructs of interest, p. 185

Table 5: Independent samples t-tests, rural and urban participants on constructs of interest, p. 185

Table 6: Multiple regression model of college adjustment with all participants (n=235), p. 186

Table 7: Multiple regression model of college adjustment for rural participants (n=123), p. 186

Table 8: Multiple regression model of college adjustment for urban participants (n=114), p. 186

Table 9: Significant contributors to rural and urban college adjustment regression models, p. 187

Table 10: Standardized direct and mediation effects on adjustment, full model, p. 187

Table 11: Standardized direct and mediation effects on adjustment, multigroup model, p. 187

Figure 1: Iteration 2, non-significant paths removed, standardized values, p. 188

Figure 2: Iteration 4, non-significant paths removed, standardized values, p. 188

Figure 3: Iteration 6, most parsimonious model, non-significant paths removed, standardized values, p. 189

Appendix A: Informed consent document, p. 190

## Chapter One: Introduction

*“When I got to college, it was the first time in my life that I wasn’t surrounded by people who loved me.” –Anonymous college student from a rural area*

The adjustment of college students has long been the focus of studies, and in recent years, the first-year student experience and its impact on mental health and other student outcomes such as adjustment and retention have garnered interest within the social sciences (e.g., Cooke, Bewick, Barkham, Bradley, & Audin, 2006). Increasingly, researchers have begun to address the experiences of students from racial and ethnic minority backgrounds on college campuses (e.g., Adan & Felner, 1995; Constantine, Chen, & Ceesay, 1995; Fischer, 2007; Sue, Zane, & Young, 1994). However, the distinct experiences of first-year students from non-majority backgrounds beyond race and ethnicity have not been broadly studied to date. Among the understudied minority groups are rural students transitioning to college.

In 2007, more than 22% of the United States’ youth attended rural schools, and among these youth, approximately 75% graduated from high school (Johnson & Strange, 2007). Although a smaller proportion of rural than urban youth pursue higher education, approximately 24% of rural youth who were in eighth grade in 1988 had completed a four-year degree by the year 2000 (Ingels, Curtin, Kaufmann, Alt, & Chen, 2002). Scholars have highlighted that rural communities have a culture of their own (Esterman & Hedlund, 1994; Wagonfeld, 2003), and thus it can be argued that rural students comprise a significant minority group on college campuses. Minority students are among those most at-risk for attrition and/or poor adjustment to college (Fischer, 2007). This

increased drop-out risk is potentially due to many factors, including (but not limited to) perceived lack of person-environment fit and less coping efficacy (Hutz & Martin, 2007).

Further, recruitment and retention of all students will necessarily become a priority for colleges across the country over the next several years. President Obama has pledged that the United States will once again have the world's highest college graduation rate by the year 2020. Of adults living in the U.S., approximately 40 percent have an Associate's degree or higher; yet this rate places the United States behind at least eleven other nations (Bland, 2010). Yet according to Bushong (2009), the retention rate amongst freshmen during the 2007-2008 academic year was only 66%-- the lowest it has been since 1989. Additionally, the United States is anticipated to experience a decrease in the overall number of high-school graduates (Finder, 2008), meaning that there will be more competition among schools in terms of recruitment of quality students. With students becoming increasingly valuable to institutions of higher education due to the shorter supply of them, one would assume that these institutions may be allocating more of their budgets to recruitment and retention in order to remain competitive. Though it may be somewhat cold to conceptualize students in these terms, students become an *investment* for institutions—and taking steps to ensure that students complete the education that they were recruited for is a wise investment maintenance strategy for institutions. Thus it is of utmost importance that all first-year students, including first-year rural students as a sizable minority, are more closely examined to gain a heightened understanding of their adjustment process, including factors that might contribute to or detract from their adjustment (which, in turn, affects their likelihood of college persistence or attrition).

On a less cold note, consideration of each individual college student as a developing *person* also contributes to the importance of this study. Counseling Psychology's unifying themes include an emphasis on educational development, celebration of multiculturalism and recognition of person-environment interactions, a focus on nurturing strengths, and a belief in the importance of prevention (Gelso & Fretz, 2001). Research in the area of college retention speaks to each of these tenets. Specifically, the transition to college is an important task in one's educational development; the culture of rural students at college is being emphasized, and many of the constructs chosen for this study (i.e., social self-efficacy, well-being) have a decidedly strengths-based, as opposed to deficit-oriented, aim. Further, this author hopes that this project serves as a starting point for future research on attrition prevention in college students.

In sum, college students from rural areas form a considerable minority on college campuses, yet they have been overlooked by research. However, what—beyond hometown location— sets a rural student apart from an urban student? In what ways might rural students' college adjustment process be different than urban students'? Some authors have intimated that a "culture of rurality" exists (e.g., Wagonfeld, 2003; Slama, 2004), and various authors have articulated ideas of what they believe characterizes rural culture. Anecdotally, it appears that many scholars interested in rurality agree that rural culture tends to be more collectivistic or communal than does the majority culture ("urban culture") in the United States. Strong family bonds and family trust (Esterman & Hedlund, 1994) and strong community kinship networks (Halfacree, 1995) have been empirically noted as potential hallmarks of "rural culture," both of which are consistent

with a collectivist cultural orientation. It has been noted that various other minority groups in the United States, such as Asian-Americans (Pang & Cheng, 1998), Mexican-Americans (Freeberg & Stein, 1996), and African-Americans (Carson, 2009) also tend to embrace collectivistic attitudes, despite the prevailing individualistic orientation in the United States. Thus rural individuals, regardless of their racial and ethnic backgrounds, may share with other minority groups the sense of being of a minority culture, including a collectivistic orientation.

Keller and Murray (1982) have suggested that the culture of rurality differs in quantitative and qualitative ways from the “overall culture” of the United States. Consequently, students transitioning from rural hometowns into college—especially when “college” means “a large university located in an urbanized area, ” may have unique issues to deal with. In other words, rural students may experience something akin to *culture shock* upon arriving at a large university. Oberg (1960) originally defined “culture shock” as the “anxiety that results from losing all of our familiar signs and symbols of social intercourse” (p. 177). Building off of Oberg’s work, Bennett (1998) offered the term “transition shock” to encompass not only *culture shock*, which is usually associated with visiting or moving to a faraway place and intimates a more severe reaction, but also other, less dramatic changes, such as moving to another location in the same country, or as in this study, coming to college. Bennett defines transition shock as “a state of loss and disorientation precipitated by a change in one's familiar environment that requires adjustment” (p. 216). Using these definitions, arguably all college students may experience some degree of transition shock, while students from rural areas may experience something that looks and feels more like actual culture shock.

Culture shock for rural students may occur in part due to the social structure of rural communities, which is often vastly different than that of urban communities. Whereas urban communities generally have various social outlets, rural communities are usually limited to the outlets of family, school (and school-related events), church, and bars available in the community (Slama, 2004). Because each rural community stands alone and somewhat isolated (to varying degrees) from other communities, a value of “keeping problems to ourselves” and distrust of outsiders is common. Thus when rural students arrive on college campuses located in urban settings, they may have a sense that they have lost many of the familiar signs of social interaction (e.g., whereas in the rural setting the student is likely to personally know everyone he or she encounters in a given day, in an urban setting, the student will know far fewer people, and acquaintances at college will be known to a lesser extent than former rural connections) consistent with Oberg’s (1960) culture shock definition. Furthermore, as social structure and opportunities are very different in rural communities, might college students from these areas have a different set of social attributes (e.g., support, self-efficacy, investment at college) that affect their college adjustment? Virtually nothing in this area has been looked at through empirical studies.

Taking all factors into consideration, exploratory work on rural students in college, including their potential differences from urban students, is necessary to understand the potential contribution of “rural culture” to college adjustment. This kind of understanding is a precursor to determining a) whether or not students from rural communities have special concerns and/or needs in their transition to college, and b) what kinds of services or programming may help rural students adjust to college.

### *Purpose of this study*

This study is intended to fill a gap in the existing literature on college adjustment. Currently, this author has not been able to locate studies that focus specifically on the first-year adjustment of rural students. Furthermore, many of this author's chosen constructs of interest have either not been widely studied in relation to college adjustment, or have not been considered in combination with each other. It is also worth noting that each of the proposed constructs of interest, with the exception of rurality, are characteristics or aspects of a person that potentially could be changed or further developed—that is, this study has less of a focus on fixed, demographic and/or trait factors than it does on more malleable state factors. Thus this study may provide data that could be used to inform future prevention and treatment programs.

The study investigates the specific contributions of several factors to the college adjustment, or acclimation to college, of first-year students. (College adjustment serves as the outcome variable in this study.) This project builds upon previous literature by investigating the relationships among the predictor variables of social support, social self-efficacy, social investment at college, psychological help-seeking, well-being, and rurality. Additionally, each of the variables' bivariate and group relationships with college adjustment is considered. A college adjustment equation for rural and non-rural students is compared in order to assess whether or not these students adjust differentially to college. A structural equation model of college adjustment is also explored as a means of better understanding the first-year college adjustment process.

In sum, this project is aimed to contribute a heightened understanding of college adjustment among first-year students, with a focus on rural students. First-year students



are the sole focus of this study for several reasons. First of all, most college attrition occurs during the first year of college, with approximately one out of every three freshman choosing not to re-enroll for a second year of study (Postsecondary Education Opportunity, 2010). Research has demonstrated that first-year students tend to report lower levels of college adjustment than did upperclassmen, especially in the social and personal-emotional (i.e., mental and physical health) arenas (Lapsley, Rice & Fitzgerald, 1990). Paired with the finding that self-reported personal- emotional and social adjustment to college predict persistence as well as or better than academic factors (i.e., GPA, academic sanctions; Gerdes & Mallinckrodt, 1994), exploring college adjustment among first-year students should be a priority in gaining a *holistic* (i.e., beyond academics) understanding of persistence and attrition factors, including how rural and urban students may differ in their adjustment.

### Constructs

This study addresses the need for research on college students from rural areas. Specifically, this project focuses on exploring variables that contribute to or detract from the college adjustment of first-year students from rural areas. *College adjustment* is a construct that quantitatively captures the experiences of college students across many domains, which is why it was chosen for the current study. For the purposes of this project, “college adjustment” will be defined as “a multifaceted process by which students acclimate to the environment associated with an institution of higher education.” In scholarship on the subject, college adjustment has been operationalized inconsistently and assessed for in various ways (e.g., outcome variables such as GPA, persistence at college, lack of psychological disturbance, and so forth). This author, consistent with

what is proposed by Baker, McNeil, and Siryk (1985), conceptualizes the college adjustment process as involving demands that vary by type and magnitude. Accordingly, the adjustment process requires a variety of coping responses (or “adjustments”). These adjustments can be broken down into four major categories (Baker & Siryk, 1984): a) *academic adjustment*, which includes a student’s motivation to do well academically and his or her academic performances, b) *social adjustment*, which focuses on adapting to other people in the college environment, c) *personal-emotional adjustment*, which concentrates on intra-personal psychological and physical problems and d) *attachment* and commitment to college in general and also to the specific college being attended (in this case, the University of Nebraska-Lincoln). Intent to persist in college is also captured within the attachment component. Baker & Siryk (1984) found that overall adjustment, as conceptualized in this study, is correlated with student persistence and college retention, as well as other “desirable” student traits (e.g., GPA, college involvement, psychological hardiness).

An inclusive, multi-dimensional definition of college adjustment was chosen for several reasons. First of all, there has been a call for institutions of higher education to foster the development of the “whole student,” rather than just a student’s classroom knowledge. Evans and Reason (2001) have stated that the most foundational concept for student affairs is “the notion that the ‘whole’ student must be considered in every educational endeavor” (p. 370). Second, a more objective measure, such as college GPA or student retention, would not be available and would be of questionable utility for the demographic of the proposed participants (i.e., first year, first semester college students at mid-semester). Additionally, because so many definitions of college adjustment have

been used in past literature, a broad definition seems to be the best option for not neglecting any one potential aspect of college adjustment. Finally, a well-researched, standardized measure (the Student Adaptation to College Questionnaire, or SACQ) has been designed to capture the four subcomponents of college adjustment as conceptualized above. All things considered, it makes the most sense for the current study to look at adjustment from many angles and adopt a broad, rather than narrow, approach.

Additionally, “rurality” is a concept that is somewhat difficult to conceptualize and define. Various definitions of what it means to be “rural” abound, not only in scholarly literature, but in general conversation. Objectively, it can be thought of as a dichotomous variable (e.g., one’s hometown is rural or it is not), or it can be thought of as lying on a continuum (e.g., a town within five miles of a large city would be “less rural” than a town hundreds of miles from the nearest city, but “more rural” than a large metropolitan area). Rurality has been defined by some scholars as pertaining to *size* of community, with “rural” generally being thought of as equivalent to “being from a town of 2,500 or less people,” (e.g., Chimonides & Frank, 1998). Other scholars define rural as “remote” or being a certain distance away from a large city or urbanized area (e.g., Kirby & Conlon, 2005). The United States Census Bureau takes both size and location into consideration in their objective definition of rural communities. Still other scholars have defined rural based on the rural way of life and self-definitions of rural people and communities (e.g., Woods, 2005).

In this study, the “rurality” construct will be conceptualized in an objective manner. The author acknowledges that rural values and rural culture are in fact important characteristics of rural areas, but as scholars are in disagreement as to which values

define “rurality” and to what extent, only population and Census Bureau designations will be used to define “rurality” for the main analyses in this study. A continuous rural variable has been created (modeled after rural conceptualization in Bettencourt, et al., 2008); this variable is split into categorical data for comparison analyses (i.e., t-tests, SEM model comparisons).

However, complicating matters of “rurality,” this author has noted anecdotally that people from the same geographical location may vary in terms of whether or not they consider themselves to be “rural” and to what extent. Thus, some subjective data on “self-identifications of rurality” was also collected. Participants were asked whether or not they identify their hometown to be rural (the subjective dichotomous definition), and rated on a Likert-type scale how strongly they identify with “being rural” (the subjective continuum definition). The author compared self-perceptions of rurality to objective measures of rurality to examine whether or not significant differences exist.

As is the case when discussing characteristics and attributes of other specific groups (e.g., women, African-Americans, gay men, etc.), a point worth remembering is that while attributes of a group may describe the group in a general sense, these attributes will not apply to each and every individual in that group. In other words, “rural individuals” do not comprise a strictly homogenous group, even though this study will often refer to it as if it is homogenous. Any differences found between groups in this study (i.e., rural versus non-rural etc.) are also generalizations. It is likely that there is as much, if not more, variability within the population of rural individuals as there is between the groups of rural and urban individuals. However, research that explores potential characteristics of certain defined groups, and differences between groups, is

necessarily based in generalization. Though not without limitations, these generalizations can serve to at least give an idea of some basic attributes and differences; that is, general findings provide scholars and practitioners with a place to *begin* their understanding on a topic. Because very little research has focused on rural versus non-rural/urban individuals at college, starting off with exploring the general differences is an appropriate place to start.

A second caveat deals with potential misinterpretation of this project's aims. Although this project will explore and assess potential differences between rural and urban students, the study's intent is not to pathologize rural values. For example, based on research reviewed in-depth below, one hypothesis of this study is that rural youth may experience a set of barriers to social investment in college that differs in magnitude and type from what a student from an urban area experiences. This hypothesis is based on the findings that rural students tend to have small and exceptionally cohesive high school peer groups (Laursen & Collins, 1994) and tend to be family-oriented (Esterman & Hedlund, 1994). However, the author does not wish to imply that small and cohesive high school peer groups or a strong value placed on family, even if they do comprise "barriers" to social adjustment, are not in and of themselves "bad"—the proximal aim of this project is simply to understand what factors do and do not contribute to rural students' adjustment, and this understanding can then help practitioners and administrators come up with ways to support rural students, who may have different values and/or priorities, in their transition to college. In sum, the distal goal is not necessarily to pathologize or suggest that there is anything inherently wrong with rural

students' *values*; rather, the goal is to help those working within the college setting know how best to work with students who embrace those values.

A major goal of this study will be the heightened understanding of the relationship between rurality per sé and college adjustment. However, there are other variables that also may contribute to the college adjustment of rural students, and a few of those variables will be examined for a more complete understanding of the first-year rural student experience at college. Constructs that will be further explored in this study—as they are related to college adjustment—include social support, social self-efficacy, social investment at college, help-seeking attitudes, and sense of well-being.

#### *Social support*

Social support, defined as the perceived instrumental and/or expressive provisions supplied by friends, family, or a significant other (Zimet, 1988), will be examined for a variety of reasons. First of all, social support has consistently been shown to be a contributor to the adjustment of first-year students (e.g., Boulter, 2002; Friedlander, Reid, Shupak, & Cribbie, 2007), with various kinds of social support perhaps playing different roles (Friedlander, et al., 2007; Toews & Yazedjian, 2007). Studies of social support in the college adjustment of first- year rural students have not been published to date, thus it is important to test its overall role, as well as the contributions of different types of social support, within this population.

#### *Social self-efficacy*

Social self-efficacy, or “an individual’s confidence in her/his ability to engage in the social interactional tasks necessary to initiate and maintain interpersonal relationships,” (Smith & Betz, 2000) and its contributions to college adjustment have not

yet been broadly studied, especially not in relation to students from rural areas. This construct was chosen for examination based on what literature has reflected about rural adolescents, namely that they are sometimes isolated from other peers, especially among adolescents living on farms (Esterman & Hedlund, 1994). Rural adolescents often have smaller, more cohesive peer groups and thus may perceive interpersonal problems as especially stressful (Laursen & Collins, 1994). Rural families tend to emphasize emotional and intellectual development more than social development (Coleman, Ganung, Clark, & Madsen, 1989), perhaps because parents may assume social development will happen naturally through rural kinship networks, or perhaps because they are isolated (e.g., farm families) and have less opportunities for social practice. Adolescents living in rural areas have also been shown to report loneliness (Woodward & Frank, 1988). All of these factors considered, it is curious as to the levels at which students coming from rural areas feel confident in their interpersonal skills.

#### *Social investment at college*

For many of the same reasons it is important to consider the social self-efficacy of rural students, it is also important to look into a student's social investment, defined for this study as "time available and motivation to initiate and maintain social ties at college." To date, the bulk of research on transitioning to college has focused on issues that "look ahead," such as re-alignment of family and friend relationships and securing new relationships. Nonetheless, taking into consideration the first year college student's tendency to "look back" or stay connected with the people and place they have come from is also important (Paul & Brier, 2001). This study attempts to integrate the concept of starting a new social life by assessing student barriers to social investment at college,

predominantly connections and obligations from a student's past or otherwise outside of the college setting, as well as motivational barriers.

Among minority freshman, the biggest barriers to college persistence are off-campus familial and job responsibilities (e.g., Nora, Cabrera, Hagedorn & Pascarella, 2006). Based on the literature that has found that rural adolescents are particularly close to their families (perhaps more so than their urban peers) (Esterman & Hedlund, 1994), may have long-standing and exceedingly cohesive peer groups from their hometown (Laursen & Collins, 1994), and may have obligations to return to the rural community after college (Haller & Virkler, 1993), and on the findings of Nora et al., barriers to social investment may be especially prominent in first-year students from rural areas.

#### *Psychological help-seeking*

This project will focus specially on mental health help-seeking attitudes rather than behaviors, and will be defined as "willingness to seek help from mental health professionals when one's personal-emotional state warrants it" (Fischer & Farina, 1995). Literature has reflected that psychological help-seeking behaviors (e.g., seeking and attending personal-emotional counseling) provide positive benefits to college student adjustment (DeStefano, Mellott, & Petersen, 2001; Wilson, Mason, & Ewing, 1997) yet the contribution of psychological help-seeking behaviors or attitudes to the college adjustment of first-year students and rural students has not yet been considered. Rural adolescents often come from places that offer limited access to mental health professionals, or where there were concerns about help-seeking due to higher potential for breeches in confidentiality (Cutrona, Halvorson, & Russell, 1996). Beyond access and privacy issues, in rural areas there is often an intense stigma attached to seeking mental



health services (Gamm, 2004). Thus, many adolescents from rural areas may be prompted to deal with concerns on their own or to only utilize informal helpers such as friends and family (Kelleher, Taylor & Rickert, 1992). Taking this all into account, the psychological help-seeking attitudes among college students from rural areas may be less positive than the attitudes of urban students. Consequently, psychological help-seeking attitudes may play an important role in the overall college adjustment of first-year college students coming from rural areas, which is why the construct is included in the current study.

### *Well-Being*

Well-being will be defined as “perceptions of psychological, emotional, and social wellness.” Generally speaking, many studies that focus on “mental health” among college students are actually measuring distress or psychological disturbance of participants (e.g., Cooke, et al., 2006; Kerr, Johnson, Gans & Krumrine, 2004). In essence, these studies attempt to tap into a *lack* of psychological well-being. However, it cannot be assumed that psychological well-being is merely the flipside of distress. In fact, empirical research has now found that subjective psychological well-being and psychological disturbance do not represent opposite ends of an illness–health spectrum, but may be more accurately conceptualized as separate and complementary constructs that are both related to the full range of human functioning (Eklund, Dowdy, Jones, & Furlong, 2011). This author concurs with Robitschek and Keyes’ (2009) statement that “Counseling psychology needs a model of multidimensional mental health that is theoretically grounded with psychometrics that are psychometrically distinct” (p.321).

Thus this study will employ a multidimensional approach to mental health and well-being which will embrace eudemonic, hedonic, and social perspectives.

#### *Clarification of constructs*

Some of the constructs in this study seem to overlap in nature (i.e., social support, social self-efficacy, social investment, and social adjustment to college). Additionally, the well-being measure includes “social well-being” as one of its constituents. However, each of these variables measures something distinct too, and each will presumably contribute something unique to the understanding of college adjustment among first year students.

Social support is a broad construct designed to tap into a students’ sense of both emotional and instrumental provisions of support bestowed upon them by specified others (i.e., family, friends, significant other). This is not limited to their social support at college, whereas the social adjustment subscale of the SACQ would be limited to assessing social *adjustment* (i.e., success) within a student’s college experience. Most closely related to the concept of social support is social well-being (one aspect of the well-being scale), yet social well-being refers to the *quality* of relationships with others and the community, in general. So, whereas social support assesses relationships with specific others, social well-being assesses general relationship quality, and also includes an emphasis on community well-being.

Social self-efficacy is a measure designed to assess students’ perceptions of their own ability to successfully engage in a broad range of social interactions. It is a qualitatively different variable than social support, in that it is about one’s confidence in oneself, rather than support received from others. Social self-efficacy is also different

from social adjustment to college in that social self-efficacy is a broad, overall construct, measuring social *confidence* in situations both before college and currently, whereas social adjustment to college is specific to college situations and asks students to give a *self-assessment* of only their current social adjustment. (It is possible that one could feel confident about his or her social skills in general yet also feel that they are not doing well socially at college, or vice versa.) Finally, social investment at college measures one's availability and motivation to adjust to college, not perceived performance (SACQ Social Adjustment), support (social support), or confidence (social self-efficacy). Please see Table i for a comparative breakdown of these social variables.

## Study

### *Methods*

Participants included 240 first-year students at the University of Nebraska-Lincoln. Transfer students or students who have returned after a hiatus from college were not included due to possible adjustment effects of their first college experience. Students from all localities were included in the sample, though more purposive sampling (i.e., soliciting East Campus students, many of whom are from rural areas, to be participants) were utilized in order to assure that enough rural students are represented in the study. A waiver of parental consent for students under the age of 19 was obtained from the Institutional Review Board, as many of the first-year students on campus were 18 years old at the time that data was collected.

A paper-based questionnaire that includes basic demographic information and measures of the constructs of interest was distributed to students in introductory courses. Support and permission was obtained from the Dean of the College of Agriculture and

Natural Sciences (CASNR) to enter introductory courses (AGRI/NRES 103, a requirement for all incoming students in the college [approximately 300 students]) to collect data. The CASNR dean also offered incentives (e.g., a pizza party or money) to the student group who completed the most questionnaires for this project (students indicated which group they belonged to on their questionnaires). This author gained support and permission from the Dean of the College of Education and Human Sciences to enter introductory courses within that college as well.

Data was collected mid-October through mid December, 2010. This period of time was specifically pinpointed in order to avoid the “honeymoon period” of adjustment at the beginning of the school year and potential adjustment effects taking place by the end of the semester (see Cooke, et al., 2006).

#### *Research Questions, Hypotheses and Analyses*

RQ1: “Do objective and subjective definitions of rurality tend to match?”

RH1: “Objective and subjective definitions will be significantly correlated.” This hypothesis is examined through use of Pearson’s correlations.

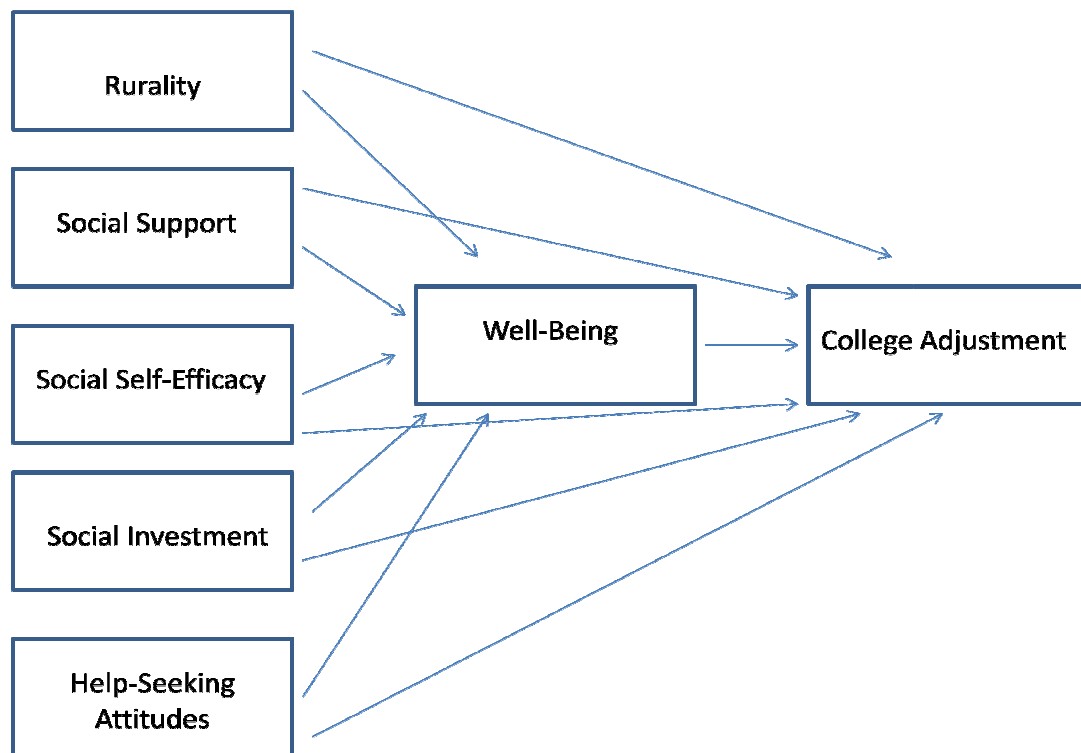
RQ2: “Does rurality have a relationship with or affect college adjustment in first-year college students?”

RH2: “Rurality will significantly correlate with the various constructs of interest (i.e., social support, social self-efficacy, social investment, help-seeking attitudes, well-being, and college adjustment).” This hypothesis is examined through use of Pearson’s correlations.

RH3: “There will be a significant mean difference between rural and urban students on each construct of interest.” This hypothesis is examined by dichotomizing the continuous rurality construct and using t-tests for analysis.

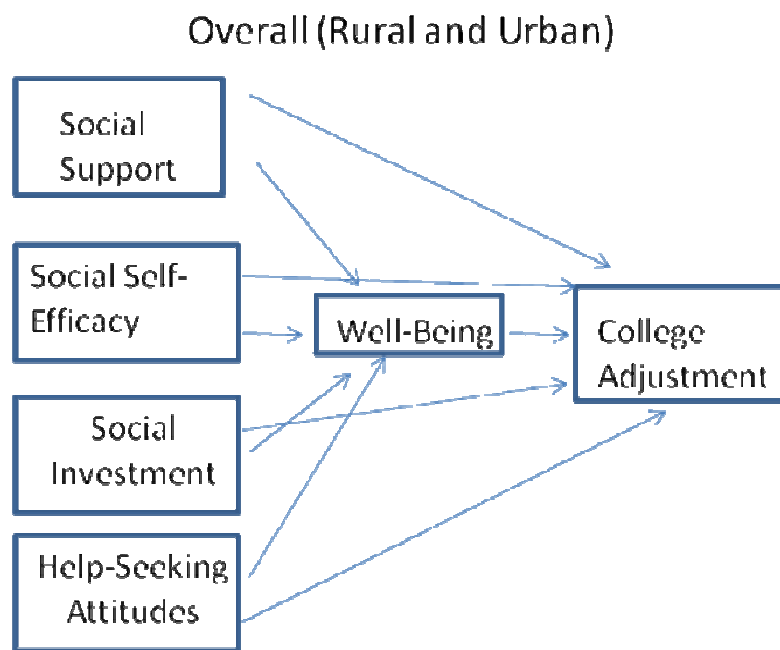
RH4: “All constructs of interest, when considered together, will create a predictive model of college adjustment.” This hypothesis is addressed by considering rurality to be a continuous variable and using multiple regression for analysis.

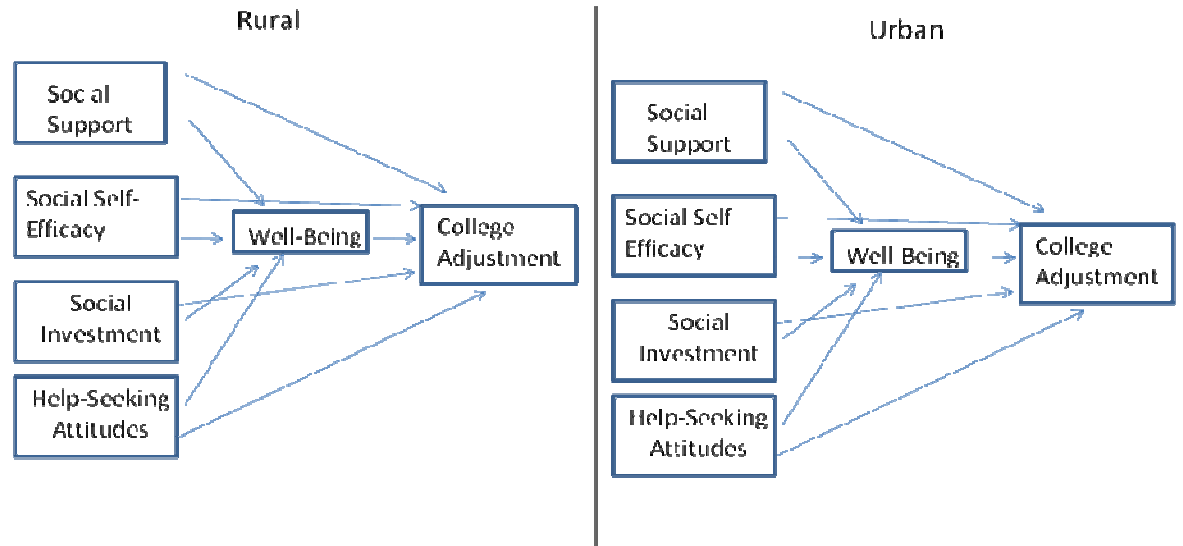
RH5: “There is a model of college adjustment such that”:



This model is analyzed utilizing structural equation modeling procedures (e.g., Muthén & Muthén, 2007). SEM is appropriate for this analysis due to the interest in causal relationships between latent variables (Thompson, 2000).

RH6: “Structural equation models of college adjustment will vary (in terms of fit or in terms of strength of relationship between the constructs) between rural and urban students.” This hypothesis is analyzed by again dichotomizing the continuous rurality variable. “Rurality” is removed from the predictive model and three separate models are examined and compared: one for the whole sample, one for urban, and one for rural students:





### *Rationale for Structural Equation Model*

This model was created based on available literature on each variable and this author's predictions about how the variables may relate. Social support is widely supported as a contributor to college adjustment (e.g., Kenny & Stryker, 1996; Phinney & Haas, 2003), yet its *unique* contributions (i.e., when considered in combination with other social variables, as in a structural equation model) has not been considered. This author is curious as to whether or not social support per sé will significantly and uniquely contribute to college adjustment, or if social support may perhaps serve as a proxy for some more specific social variables (i.e., social self-efficacy or social investment). Further, examining potential differences between rural and urban students in terms of the strength of the contribution of social support to college adjustment is also informative.

Social self-efficacy has received only a small amount of research attention in its role as a possible positive contributor to college adjustment (e.g., Ferrari and Parker, 1992; Patterson and O'Brien, 1997), and has never been studied in relation to rurality. Based on the findings that rural students are sometimes isolated from other peers

(Esterman & Hedlund, 1994), have smaller, more cohesive peer groups and may perceive interpersonal problems as especially stressful (Laursen & Collins, 1994), and come from families that tend to emphasize other types of development above social development (Coleman et al., 1989), exploring the extent to which social self-efficacy uniquely and differentially contributes to equations of college adjustment is crucial.

Social investment is considered in tandem with this particular set of variables for two main reasons: 1) to examine its unique contributions to college adjustment, if any, and 2) to examine whether or not its relationship strength differs between rural and urban populations (holding all other variables constant). Based on findings of scholars who have studied characteristics of rural youth (e.g., Haller & Virkler, 1993; Laursen & Collins, 1994) it seems likely that rural students may have a more difficult time—or perhaps, a different process altogether—of divesting from their pasts and investing in a new life at college. Studying the urban and rural equation models will aid in understanding whether or not this supposition may be true.

Help-seeking is being included in the equations for various reasons. Much research to date on help-seeking has focused on what predicts it, rather than what it may predict. An equation that includes help-seeking provides information on whether or not help-seeking is a significant and unique predictor of well-being and college adjustment (in combination with these particular variables). Further, it is suggested in the subsequent review of the literature that college students from rural areas may have less positive help-seeking attitudes, perhaps due to lack of exposure to mental health professionals in rural areas, (Health Resources and Services Administration, 1992) increased help-seeking stigma in rural areas (Gamm, 2004), and differential understandings of what a mental



health problem entails between rural and urban youth (Chimonides & Frank, 1998).

Examining whether the strength of relationship between help-seeking, well-being, and college adjustment, in combination with the other variables, is similar or different for urban and rural youth could potentially be a very important element of this study in terms of its future applications.

Well-being is being included as a potential mediator between the other constructs of interest and college adjustment. Baron and Kenny (1986) state that a mediator variable “accounts for the relation between the predictor and the criterion” (p. 1176). Holmbeck (1997) noted that SEM strategies are particularly appropriate in applications like the proposed study in which there are multiple indicators (i.e., questionnaire items) for the variables. Aspects of well-being, such as self-esteem (Bettencourt, et al. 1999), optimism (Montgomery, Haemmerlie, & Ray, 2003), and personality variables (i.e., The Big Five; Wintre & Sugar, 2000) have been found to be directly or indirectly related to college adjustment. Yet one’s overall well-being, a resilience variable, has not been studied as frequently or in as much depth as risk variables (e.g., mental disturbance, stress, alcohol use, etc), especially in relation to college adjustment. Further, whether or not well-being might mediate the relationship between social aspects of a student and their resultant college adjustment has not yet been studied. Thus this author proposes that a student’s level of well-being will at least partly mediate (i.e., account for) the relationship between four independent variables (social support, social self-efficacy, social investment, and help-seeking) and the dependent variable (college adjustment).

Finally, the rural versus urban comparison SEM question is being explored due to the potential moderating affect of rurality on college adjustment. According to Baron and

Kenny (1986), a moderating variable “affects the direction and/or strength of a relation between an independent or predictor variable and a dependent or criterion variable” (p. 1173). The author proposes that relationships between the various constructs of interest and college adjustment may be different dependent on rural versus urban locale.

## Chapter 2: Overview of Previous Research

The following literature review focuses on literature relevant to the outcome variable (college adjustment) and the predictor variables (i.e., social support, social self-efficacy, social investment, psychological help-seeking, and well-being) included in this study. First, a framework for understanding this study, including how the author decided on constructs of interest, is presented. College adjustment is then reviewed in a general sense in its own section; additionally, subsequent sections discuss how prior literature has demonstrated relationships between each predictor variable and college adjustment. Rurality, a contextualizing predictor variable, is considered to be one of the major foci of this study. Thus rural considerations, including how rurality may affect or interact with constructs, are also included in each section. Further, a general review section of rurality and rural concepts is included.

### *Framework for construct inclusion*

Consistent with several of the defining themes of Counseling Psychology (Gelso & Fretz, 2001), the author approached this project with preventative, person-environment interaction, and strengths-based lenses. A focus for many professionals working with college students is the attrition question: How do we stop students from dropping out? In other words, how do we *prevent* attrition? This study takes some strides to providing potential answers to this question via attempting a better understanding of first-year college student adjustment, which has been shown to be inversely related to attrition (Baker and Siryk, 1984).

In line with the preventative lens, the author has sought to focus specifically on constructs that could be changed, aspects of students' lives or self-perceptions that could

be shaped in efforts to prevent attrition. In conjunction with the major contextualizing variable of rurality, the fixed variable in this study, social factors became prominent. Because rural life generally comes with a qualitatively and quantitatively different social setting than does urban life (Slama, 2004), exploration of the contribution of social factors to adjustment seemed of utmost importance to understanding how rurality may (or may not affect) the college adjustment experience of first-year students. Specifically, the author has chosen to take a deeper look at social support, social self-efficacy, social investment, psychological help-seeking, and well-being—each of these social variables is somewhat malleable and constitutes more of a “state” than a “trait.”

This study’s constructs of interest are not only malleable and lend themselves to prevention, but are also strengths-based. Counseling Psychology has traditionally been more concerned with identifying and nurturing strengths in a person (Gelso & Fretz, 2001), and this study also seeks to understand more of what is going *right* with college students in their adjustment processes, as opposed to a sole focus on what might be going wrong.

In sum, inclusion criteria for this study’s predictor variables include the potential to be intervened on, strengths-based, and related to person-environment interactions (i.e., social variables). Rurality, the lone demographic (and hence, fixed) variable, was chosen as an important cultural and contextual variable, as is discussed in the introduction to this project.

### *College adjustment*

For the purposes of this project, “college adjustment” will be defined as “a multifaceted process by which students acclimate to the environment associated with an

institution of higher education.” This author, consistent with what is proposed by Baker, McNeil, and Siryk (1985), conceptualizes the college adjustment process as involving demands that vary by type and magnitude. Accordingly, the adjustment process requires a variety of coping responses (or “adjustments”), the specifics of which are discussed in-depth in the introduction to this project.

Though the construct of college adjustment has long been of interest to scholars (see, e.g., Wright, 1967) it has also had a relatively short history of being studied directly or being operationally defined. Even today, a complicating aspect in the field of literature on college adjustment is the lack of a unified definition on what “college adjustment” entails. Some studies (e.g., Boulter, 2002; Fischer, 2007; Trockel, Barnes, & Egget, 2000) conceptualize college adjustment as mostly academic in nature, and thus focus on GPA or course grades as a measure of adjustment. Others discuss adjustment in terms of mental health, and utilize measures of psychological well-being (Cooke et al., 2006) or disturbances such as stress (Hersh & Hussong, 2006), distress (Paul & Brier, 2001), or feelings of alienation (Klomegah, 2006) to measure adjustment (or lack thereof). Still others create their own measures of adjustment by self-authoring questionnaires (e.g., Eimers & Pike, 1997), or even by using a single item that asks students to rate their subjective opinion about their adjustment to college on a scale from one to five (Lafreniere & Ledgerwood, 1997).

Because so many scholars have studied college adjustment, a great deal is known about its possible correlates. Some of these correlates have been chosen as constructs of interest and are afforded their own section in this review; yet, for sake of inclusiveness and a broad understanding of college adjustment, some general findings on college

adjustment (i.e., constructs that are outside of the scope of this project, yet still helpful to know and understand) will be briefly reviewed in the following section.

*Psychological and health factors.* Some attitude and personality variables and their relationships to college adjustment have been considered. In an investigation of attitudes toward intellectual activities, a negative relationship between anti-intellectual attitudes and academic, institutional, and general adjustment were found (Hook, 2004). Perfectionism has also been studied in college populations. Pritchard, Wilson, and Yamnitz (2007) reported that perfectionism may be related to physical complaints but not to negative mood, whereas Rice and Lapsley (2001) found differences between different types of perfectionists: “maladaptive” perfectionists (those with high personal standards, high parental expectations for excellence, and anxiety about mistakes or criticism) have generally reported lower personal-emotional adjustment (Rice & Lapsley). In terms of health factors and college adjustment, bedtimes, wake-up times, and frequency of weight lifting sessions all significantly related to college adjustment, in that earlier and later bedtimes were related to higher adjustment, as was more strength training (Trockel, Barnes, & Egget, 2000). Finally, the role of alcohol use on adjustment has been considered. Studies have conveyed that drinking beer does not affect adjustment in students, but hard liquor use is negatively related to general adjustment and academic adjustment (Montgomery & Haemmerlie, 1993). Meanwhile, students who experimented with drinking in high school (as opposed to those who abstained, or drank moderately or heavily) generally report higher levels of psychosocial adjustment in college (Hersh & Hussong, 2006).

*Family characteristics.* Contributions of families of origin, as well as attachment to parents and attachment style, have been the subjects of many studies on college adjustment. In general, findings suggest that family conflict is negatively correlated with adjustment (Feenstra, Banyard, Rines, & Hopkins, 2001; Haemmerlie, Steen, & Benedicto, 1994). Haemmerlie et al. also found that students who came from families with better coping skills had higher adjustment. In related research, divorce in the family of origin was negatively correlated with secure attachment to one or both parents, and insecure attachments were found to be negatively correlated with adjustment (Hannum & Dvorak, 2004). In this case, conflict was significantly yet indirectly related to adjustment, with attachment to parent serving as a mediator. Other studies (Lapsley & Edgerton, 2002; Larose & Boivin, 1998) reported a similar, positive relationship between secure attachment style and college adjustment. Lapsley et al. (1990) observed no differences between freshmen and upperclass students on perceived attachment to parents, and also no gender differences in attachment, yet Lapsley, Rice, and Shadid (1989) found that college first-year students felt more psychologically dependent on parents than did upperclass students, and these feelings of psychological dependence were negatively correlated with personal-emotional adjustment to college.

Conflict and attachment style are not the only family-related variables to have received attention from researchers. Relationships with parents have also been taken into consideration. A convergence of evidence shows that parent-child relationships that are characterized by higher levels of reciprocity (Wintre & Sugar, 2000; Wintre & Yaffe, 2000), parent-child independence (Silverthorn & Gekoski, 1995), and high levels of

parental support (Lafreniere & Ledgerwood, 1997) are related to higher levels of adjustment.

In general, research on family variables and their relationship to college adjustment matches what would be intuitively expected: less conflict in the family, higher quality attachment to parents, and other positive family characteristics (e.g., parental support, parent-child mutual reciprocity) are related to more positive outcomes in college adjustment. Other family variables may relate to college adjustment (e.g., social support), and will be more fully explored in a later section of this review.

*Belonging, person-environment fit, and alienation.* These three factors have generally been examined independently of each other, yet it appears that they are nearly the same construct. In the college adjustment literature, a sense of “belonging” seems to be assessed by asking students how well they feel they fit in the college environment (e.g. Ostrove & Long, 2007). Likewise, some studies on person-environment fit describe “fit” as “congruence” (Adan & Felner, 1995, p.256), and studies on alienation define it as “synonymous with a lesser degree of compatibility in the person-environment relationship” (Baker & Siryk, 1980, p. 437). Thus, the findings of research on these three constructs can be thought of as one, larger pool of knowledge, and one that is generally in agreement. Several studies demonstrate that these factors relate to college adjustment in that the higher the level of fit, the higher the level of adjustment. Most of the studies in this review more specifically address the role of ethnicities in regards to belonging, fit, or alienation. Klomegah (2006) observed no differences in international and American students in experiences of alienation, finding that many students across different cultures experience this feeling. Students who had more contact with other students (from any



background) felt less alienated from the college environment than those who had less contact with their peers. However, Sennett et al. (2003) found that at a historically White university, Black students scored lower than White students on social adjustment, yet were equivalent in their level of institutional adjustment. One way to interpret this result is that even though Black students valued and felt attached to the university, they felt alienated within it.

In a study that focused not on ethnicities but instead on social class and belonging, Ostrove and Long (2007) found that a sense of belongingness was positively related to academic performance, and that objectively and subjectively reported socioeconomic status (SES) measures predicted self-reports of belongingness. Taking all of that into consideration, this study suggests that SES “sets the stage” for students’ self-perceptions of belonging, and these perceptions affect college adjustment. Similarly, Pittman and Richmond (2007) observed that a sense of belonging at high school and at college was a significant predictor of college academic and psychological adjustment, and Baker and Siryk (1980) showed that students who felt more alienated were more likely to report difficulty adjusting to college and having general dissatisfaction with college. Overall, it seems that belonging and person-environment fit generally have a positive relationship with college adjustment, whereas feelings of alienation negatively relate to adjustment.

*Generation.* Whether or not a student is the first in his or her family to attend college appears to make a difference in terms of adjustment. First-generation students have reported feeling less of a sense of belonging than college students who were not the first in their families to attend (Pittman and Richmond, 2007). As discussed earlier, a

sense of belonging predicts attachment to the college institution, thus Pittman and Richmond's findings speak to the indirect relationship of generation with adjustment: first-generation students report lower adjustment. However, this research also found no significant differences in course grades between first-generation and other-generation college students, and found that a sense of high school belonging seemed to be a protective factor for a subgroup of first-generation students (those whose parents had attended, but not graduated, from college). Similarly, Pike and Kuh (2005) found that first-generation students were less engaged in college and perceived the college environment as less supportive than their peers, yet unlike Pittman and Richmond, this study did find an academic difference in that first generation students reported making less academic progress. Fischer (2007) also observed that first-generation students had lower grades, especially among White and Hispanic students. Generally speaking, research suggests that first-generation students appear to have a more difficult time adjusting to college.

*Living situation.* A few studies have attempted to discover how student's living situations may contribute their college adjustment. Lafreniere and Ledgerwood (1997) reported contextual results about the impact of living situation on adjustment; adjustment appeared to depend on the role of social support. When students experienced low levels of family support, females reported better adjustment when they lived away from home, whereas males with low family support adjusted better when they lived at home. Additionally, this study observed that females who lived at home reported more stress, whereas males who lived at home reported less stress; these experiences of stress likely contribute to the varying levels of adjustment. Students who lived on campus have also

reported better learning outcomes (Pike & Kuh, 2005). Beyond whether a student lives at home or on campus, where a student lives on campus may make a difference for his or her adjustment. Enochs and Roland (2006) observed gender differences in overall adjustment of students in their study, with men reporting significantly higher levels of adjustment than women. Yet when just “First-Year Experience” (FYE) residence hall students were analyzed, no significant gender differences remained. In other words, living in a FYE hall seemed to help females “catch up” to males in adjustment. Also, this study found that students who lived in the FYE halls reported significantly higher levels of adjustment than students who lived in traditional residence halls. The synthesis of these results suggests that for many students, living on campus, especially in an environment tailored to the needs of first-year students, is beneficial to adjustment, but some students (namely males) may fare better if they live at home during college. In other words, the results on this variable remain somewhat mixed.

For those students who have moved away from home to attend college, distance from home may relate to college adjustment. In Mooney, Sherman, and Lo Presto (2001), students’ perceptions of how far away from home they were resulted in significant differences in adjustment. Students who reported distance from home as “just right” reported better college adjustment than did those who said distance was “too far.” In this study, actual geographic differences in distance from home did not relate to adjustment, yet a phenomenological study found that the students who lived farthest away from home appeared to be less adjusted overall (Tognoli, 2003). Thus, research on distance from home has also resulted in mixed outcomes.

Overall, it seems that living situation does contribute to college adjustment, although the relationship is often contextual, and may often relate more to perceptions of the living situation than the situation in and of itself.

*College involvement.* Closely related to variables such as living situation and belongingness, students' level of involvement appears to play a role in college adjustment. Overall, students who were involved in more activities or were in some way more "integrated" into the college campus report higher levels of adjustment (Bettencourt, Charlton, Eubanks, Kernahan, & Fuller, 1999; Eimers & Pike, 1997; Enochs & Roland, 2006; Klomegah, 2006; Montgomery & Haemmerlie, 1993; Oliver, Rodriguez, & Mickelson, 1985). Despite the great deal of evidence supporting involvement as positively related to adjustment, it is important to note that a study by Trockel et al. (2000) found a negative correlation between number of work or volunteer hours and GPA (i.e., academic adjustment). Thus, it appears that whereas involvement is generally beneficial in promoting adjustment, too much work or volunteering may be detrimental, at least for academic adjustment. Also, Trockel et al. did not ask for students to specify whether their work and volunteering hours were accrued on campus or off-campus. Speculation can be made that differences in adjustment may emerge depending on where a student works or volunteers.

*Summary of general college adjustment.* Various concepts, such as psychological and health factors (e.g., Rice & Lapsley, 2001, Trockel, 2000), family characteristics (e.g., Hannum & Dvorak, 2004; Feenstra et al., 2001; Haemmerlie et al., 1994; Wintre & Sugar, 2000), belonging (e.g., Ostrove & Long, 2007), generation (Fischer, 2007; Pike & Kuh, 2005; Pittman & Richmond, 2007), living situation (e.g., Lafreniere & Ledgerwood,

1997, Mooney et al., 2001, Pike & Kuh, 2005) and college involvement (Bettencourt, et al., 1999; Eimers & Pike, 1997; Enochs & Roland, 2006; Klomegah, 2006; Montgomery & Haemmerlie, 1993; Oliver, Rodriguez, & Mickelson, 1985) contribute to students' college adjustment experiences.

As this section demonstrates, much scholarship has gone into exploring potential correlates of college adjustment. Yet, as discussed above, there is a dearth of literature that focuses its attention on predominantly malleable social factors in their relationship to college adjustment—that is, many of the studies reviewed above lend themselves to understanding the adjustment phenomenon, but in many of those cases, not necessarily to providing information on how one might *prevent* adjustment problems on a personal or interpersonal level. Though this study is also one that will primarily provide understanding, it may also be a stepping stone to the creation of college attrition prevention programs. Thus constructs of interest were chosen with a decidedly preventative lens, and with an emphasis on social factors. The remainder of this literature review will focus specially on those concepts chosen for further attention and exploration in the current analysis.

#### *Social support and college adjustment*

Social support is a variable that has been widely studied in relationship to college performance and adjustment, with many studies (e.g., Kenny & Stryker, 1996; Phinney & Haas, 2003) supporting the notion that social support can be beneficial for student adjustment to college. Yet the contribution of social support may vary according to the source and type of support given.

One almost universal finding is that social support from friends is helpful in the transition to college (e.g., Smith & Zhang, 2009, Friedlander et al., 2007; Martin, Swartz-Kulstad, and Madson, 1999). Yet Smith & Zhang (2009) found that whereas the number of discussions about college with peers was positively correlated with college GPA, non-academic discussion with friends was negatively associated with GPA. Interestingly, the role of social support from significant others during the transition to college has not been greatly considered in research as of yet. Using a college population, Zimet et al., (1988) found evidence for a three-factor model of social support, with one of those factors being support from a significant other. Beyond this finding, the role of support from significant others in college appears to be unknown, as of yet.

The role of parental support in the adjustment to college is less straightforward. Smith and Zhang (2009) found that support from mother was perceived by first-year students as having been the most helpful college transition factor. In contrast, Friedlander et al. (2007) found that increased levels of social support from friends, but not from family members, predicted college adjustment, and Martin et al. (1999) found that parental support did not significantly correlate with adjustment. The somewhat counter-intuitive findings of parental support not being related to college adjustment may also be explained through closer examination of research that also includes data on the parent-child relationship or the family situation. Wintre and Yaffe (2000) found that mutual reciprocity between parents and their college student, as well as student discussions about college with parents, positively contributed to college adjustment. According to this study, parenting style usually contributed indirectly by contributing to other predictors of adjustment (e.g., authoritativeness being positively related to all “relationship with

parents'' variables, many of which were directly predictive of college adjustment).

Another study by Hannum and Dvorak (2004) reported that first-year students who felt more attached to their fathers also reported higher levels of social adjustment, and that conflict in the family had an indirect and negative effect on social adjustment. In sum, the quality of the relationship between parents and children seems to affect college adjustment more than parental social support per sé.

How support affects one's college adjustment may also be affected by other factors. In a study by Bettencourt, Charlton, Eubanks, Kernahan & Fuller (1999), prediction of adjustment related to the quality, rather than the quantity, of students' social relationships (which is similar to what was found by scholars who studied familial factors and support). Furthermore, many studies on social support suggest that social support often affects adjustment in an indirect way. Klomegah (2006) found that students who reported higher levels of contact with others showed lower levels of alienation, and lower alienation may relate to increased levels of adjustment. Likewise, Phinney and Haas (2003) found that students who had high levels of social support often coped better with problems, which may also contribute to enhanced adjustment.

Given that the relationship between social support and adjustment often appears to be indirect, mediating and moderating variables have been shown to affect the correlation. For instance, Lafreniere and Ledgerwood (1997) found that all students in their study who perceived high levels of support from home had higher adjustment scores, yet when students perceived low family support, living situation became a mediating factor. Women with low familial support fared better on adjustment when they

lived away from home during college, and low familial support men showed more adjustment when they lived with their families.

Although the relationship is sometimes indirect, most studies find that social support is beneficial to the adjustment of college students. However, Boulter (2002) did not find a relationship between support from close friends and academic adjustment, nor did this study find a relationship between the influence of family members and academic adjustment. Further, this study reported that men who expressed high needs for close friendships had lower scores on academic adjustment, suggesting that this population of men may have more difficulty adjusting, at least academically. However, the study did not measure whether or not the individual participants' expressed needs in terms of close friendships *were being met*. It could be an unmet need for closer friendships is contributing to lack of adjustment or non-significant findings, rather than number of friends or desire for close friendships.

The role that social support plays in the adjustment of students from rural communities has not yet been considered through research, but some insight may be gained through examining the literature on social support and college adjustment among other minority groups. Eimers and Pike (1997) compared a predictive model of college adjustment for minority (defined as "non-White") and majority (defined as White) students. They found external support to have a nearly equally positive contribution in both models. Yet Toews and Yazedijan (2007), who studied White and Hispanic college students, found that social support predicted adjustment for White students and Hispanic females, but not for Hispanic males. Fischer (2007), who examined a number of different racial and ethnic groups, found that minority students reported having more off-campus



ties than did White students. Per the effect of these ties, the Black and White students who reported the most off-campus ties also had the lowest college grades, yet this finding did not hold true for Asian and Hispanic students. Having more formal on-campus ties was related to having higher grades among all minority group students, but not for White students. Thus, the sources of the social support seemed to have differential impacts on college adjustment, based on ethnic/racial group.

*Summary of social support and college adjustment.* In sum, it appears that most research (e.g., Hurtado, Carter, & Spuler, 1996; Kenny & Stryker, 1996; Phinney & Haas, 2003) supports the notion that social support has a positive impact on adjustment to college. Social support from friends is almost universally supported as being helpful for the college transition (e.g., Smith & Zhang, 2009, Friedlander et al., 2007; Martin, Swartz-Kulstad, and Madson, 1999). Findings on parental support and college adjustment are more disparate, with some (e.g., Friedlander, et al., 2007; Martin et al., 1999) finding no relationship between the two, and others (e.g., Wintre & Yaffe, 2000) finding a positive relationship. Other factors, such as the quality of relationships (Bettencourt, et al., 1999), feelings of alienation (Klomegah, 2006), coping (Phinney & Haas, 2003), living situation (Lafrenier & Ledgerwood, 1997) may mediate or moderate the relationship between social support and college adjustment. Few studies (e.g., Boulter, 2002) have found no relationships between social support and college adjustment.

In spite of the various caveats and contextual considerations, it would appear that by and large, most studies find social support in its various forms to be helpful to college student adjustment. Yet because social support's role in the adjustment of rural students to college has not yet been examined in scholarly literature, and because studies of other

minority groups point to the possibility of differential influences of social support on college adjustment, based on group identification (e.g., Fischer, 2007; Toews & Yazedijan, 2007), it is an important variable to consider in this project.

It is curious as to whether other social constructs, such as social confidence and investment, also have a relationship with college adjustment. The following sections of this review will consider this proposition by reviewing literature on social self-efficacy and social investment and their possible relationships to college adjustment.

#### *Social self-efficacy and college adjustment*

Understanding the construct of social self-efficacy requires an understanding of self-efficacy in general. The term *self-efficacy* was originally coined by Bandura (1977), and can be thought of as a person's self-evaluation of his or her ability to perform a given behavior. Self-efficacy operates separately from abilities, though according to Bandura, both skills and self-efficacy beliefs are required for competent functioning of the given behavior. Bandura (1997) has gone on to argue that self-efficacy has direct effects on features of negative psychological adjustment, such as anxiety and depression.

Several authors (e.g., Fan & Mak, 1998; Matsushima & Shiomi, 2003; Sherer et al., 1982; Smith & Betz, 2000); have extended Bandura's work into a more specific construct: social self-efficacy. This construct has been defined and quantified in a variety of different ways. For example, Matsushima & Shioma have conceptualized social self-efficacy as having three main components: social skill in personal relationships, trust in friends, and trust by friends. (It must also be taken into consideration that this definition of social self-efficacy was engineered by Japanese researchers and the resultant measure was intended for use with Japanese college students, thus cultural differences may also be

playing a role in the definition's uniqueness). Sherer et al. (1982) found evidence for a social factor of self-efficacy while validating a measure of general self-efficacy. Though this finding was unintended and the definition of the construct has not been well-defined, the resulting six-item sub-scale is commonly used as a measure of social self-efficacy in research. Smith & Betz (2000) define social self-efficacy as "the individual's confidence in her or his ability to engage in the social interactional tasks necessary to initiate and maintain interpersonal relationships," and argue for a behaviorally-focused definition and measurement of social self-efficacy, encompassing six general concepts: making friends, pursuing romantic relationships, social assertiveness, performance in public situations, groups or parties, and giving or receiving help.

Social self-efficacy, as measured in the various ways described above, has been shown to be associated with a host of psychological factors. Connolly (1989) found social self-efficacy to be positively related to several psychological components, including perceived social acceptance, general self-worth, cognitive and physical competence, and self-esteem. A path analysis by Smith and Betz (2002) revealed that social self-efficacy had a direct effect on shyness and career indecision, both of which had direct effects on depression; thus in this study social-self-efficacy appears to have an indirect effect on depression. Also, Wei, Russell, and Zakalik (2005) have suggested that social self-efficacy may moderate the relationship between anxiety, loneliness, and depression. McFarlane, Belissimo, & Norman (1995) found a direct negative relationship between social self-efficacy and depression (among adolescents). Though the means by which social self-efficacy relates to psychological factors varies, research in this area is largely in agreement: social self-efficacy is negatively related to psychological maladjustment.

In terms of academic performance, social self-efficacy has been demonstrated to be positively related to college freshman GPA, number of credit hours completed in the freshman year, and academic adjustment (Ferrari and Parker, 1992; Patterson and O'Brien, 1997). Patterson and O'Brien also found a positive relationship between social self-efficacy and social adjustment to college.

Social self-efficacy and its potential role in college adjustment among students from rural areas have not yet been considered in empirical research. What has been learned about adolescents living in rural areas points to a need to include this variable in the current study. For example, rural adolescents, especially those living on farms, are often isolated from their peers (Esterman & Hedlund, 1994). Also, adolescents in rural communities frequently have very small and cohesive peer groups (Laursen & Collins, 1994); often a rural student's high school peer group has been intact since elementary school. Thus, college students coming from rural communities may have less experience in making *new* friends and in other novel social situations, which may negatively affect their social self-efficacy. Further, Coleman et al. (1989) found that rural families tended to emphasize emotional and intellectual development to a greater degree than social development, perhaps because parents may assume social development will happen naturally through intact rural kinship networks, or perhaps because they are isolated (e.g., farm families) and have less opportunities for social practice. Adolescents living in rural areas have also been shown to report feelings of loneliness (Woodward and Frank, 1988). Taking all of this into consideration, the social self-efficacy of rural adolescents (as compared to their urban counterparts) may be lacking, especially in terms of feeling efficacious in novel social situations.

*Summary of social self-efficacy and college adjustment.* Social self-efficacy is derived from Bandura's general self-efficacy (1977), and has been defined differentially by various scholars (e.g., Fan & Mak, 1998; Matsushima & Shiomi, 2003; Scherer et al., 1982; Smith & Betz, 2000). Research has illustrated that social self-efficacy is associated with a multitude of other psychological features, most importantly (for this review) a negative association with anxiety and depression (McFarlane et al., 1995; Wei et al., 2005) and a positive relationship with freshman GPA, credit hours completed in the freshman year (Ferrari and Parker, 1992), as well as academic and social adjustment to college (Patterson and O'Brien, 1997).

The role of social self-efficacy in relation to students from rural areas has not yet been considered, nor has its relationship with other social variables in prediction of college adjustment been explored. Additionally, social self-efficacy could presumably be enhanced by programmatic efforts, and is more of a strengths-based variable. Taking all of these factors into consideration, social self-efficacy becomes an important variable to include in this study. Further, related research points to its inclusion in a study of rural students: It is predicted that based on the rural adolescents' small, long-standing peer groups (Laursen & Collins, 1994), occasional isolation from peers among farm adolescents (Esterman & Hedlund, 1994), and greater emphasis on emotional and intellectual than social development by rural parents (Coleman et al., 1989), social self-efficacy scores among college students from rural communities will be lower than urban self-efficacy scores. This disparity may in turn negatively impact the college adjustment of rural students.

### *Psychological help-seeking and college adjustment*

The general construct of “psychological help-seeking” includes two basic concepts: behaviors and attitudes. *Behaviors* include actions taken, such as seeking counseling in the past. *Attitudes* towards psychological help-seeking speaks more to an individual’s personal beliefs about seeking professional assistance for mental health, or a “willingness to seek help from mental health professionals when one’s personal-emotional state warrants it” (Fischer & Farina, 1995). For the broadest possible understanding of help-seeking and its role in college adjustment, this review will include literature on both psychological help-seeking behaviors and attitudes, although only information on attitudes will be used in this study’s proposed analyses.

Many constructs, such as willingness to self-disclose (Kelly & Achter, 1995; Vogel, Wade, & Hackler, 2007; Vogel & Wester, 2003; Vogel, Wester, Wei, & Boysen, 2005), emotional openness (Komiya, Good, & Sherrod, 2000), social support (Vogel et al., 2005), social norms (Bayer and Peay, 1997; Vogel et al., 2005) self-efficacy (Celluci, Krough, & Vik, 2006) and predicted utility of counseling (Vogel et al., 2005) have been found to be positive correlates or predictors of help-seeking behaviors and attitudes. Mental illness stigma, which can be defined as a social-cognitive process that operates by motivating the general public to reject, avoid, fear, and discriminate against those with mental illness (Corrigan, 2004), is beginning to garner some attention in terms of its contribution to help-seeking, though Hwang, Myers, Abe-Kim, & Ting (2008) have stated that stigma is as of yet understudied and is deserving of greater attention. Those who have studied stigma have found that it has a negative contribution to help-seeking attitudes (Celluci et al., 2006; Komiya et al., 2000; Vogel et al. 2007; Vogel et al. 2005).

As the above paragraph demonstrates, the current literature on help-seeking is mostly concerned with prediction of help-seeking. Coming to a greater understanding of the other side of help-seeking—that is, what help-seeking is predictive of—is also of importance, yet considerably less research focuses on this topic. In spite of the relative dearth of literature in this area, a few studies have found that psychological help-seeking behaviors seem to play a role in boosting student's adjustment to college. A longitudinal study by DeStefano et al. (2001) compared students who had and had not participated in counseling at a college counseling center across the course of a semester. Their results showed that those who participated in counseling had significantly higher scores in overall adjustment, as well as subscales for personal-emotional, social, and academic adjustment. Another group of authors (Wilson et al., 1997) sought to explore whether or not students who receive counseling are more likely to persist at college. They compared students who had received personal-emotional counseling at a college counseling center with those who had been placed on a waiting list for counseling but declined treatment when it became available. Results showed that students who received counseling were significantly more likely to still be enrolled two years after counseling than those who did not receive treatment.

Thus, it seems that many factors are likely to play a role in diminishing or increasing help-seeking behaviors and attitudes, and these behaviors and attitudes may then affect college adjustment. Rurality and its possible contributions to the help-seeking/college adjustment relationship have not yet been subjected to rigorous study. Yet what is known about help-seeking and beliefs about mental health among rural youth and rural individuals in general is helpful in gaining perspective on the subject.

Sears (2004) found a dramatic disparity between rural youth who (on objective measures) reported a serious problem (45%), and those who perceived that they needed help for that problem (15%). A possible rationale for the disparity between those reporting problems and those perceiving a need for help is that perceptions mental health and illness are embedded in a social context, thus those who come from different cultures may differentially experience, interpret, and label possible mental health disturbance (Kleinman, 1988). Evidence of the impact of rural culture is provided by Chimonides and Frank (1998), who found that rural adolescents tend to perceive mental health problems differently than do urban adolescents, especially in terms of tolerance for alcohol abuse.

Rural youth also tend to obtain psychological services at a lower rate than do their urban peers. Cohen and Hasslebart (1992) found that among youth that had been diagnosed with a psychological problem, rural and semi-rural youth were the least likely to have contact with mental health services, even after controlling for demographic and diagnostic differences. Part of the disparity between who needs services versus who receives services can be attributed to lack of available services. In rural communities, the mental health service delivery process usually starts in the school, emergency room, or general practitioner's office (Gale & Deprez, 2003). Unfortunately, the service delivery "process" often ends in the setting where it begins. Mental health specialists are sparse in rural communities. In 1993, 55% of United States counties had no practicing psychiatrists, psychologists, or social workers, and all of these counties were rural (National Advisory Committee on Rural Health, 1993). Generally speaking, individuals who practice within the mental health professions remain concentrated in urban settings; for example, in 1986, about 94% of all psychiatrists and 90% of psychiatric and mental



health nurses with graduate degrees practiced in metropolitan areas (Health Resources and Services Administration, 1992). Individuals with psychological concerns sometimes have no alternative beyond their primary care physician (Sears, Evan, and Kuper, 2003). This author has observed that even the idea of receiving counseling or consulting with a mental health professional seems to be a foreign or exotic concept in rural communities, and this is likely due in part to the absence of such professionals working and available to the rural population.

Yet even when psychological services are available, those who live in rural areas often choose not to utilize them. Underutilization of available services is a problem in both urban and rural locations (U.S. Department of Health and Human Services, 1999), though a report by U.S. Surgeon General (US DHHS, 1999) stated that rural individuals may experience a particular set of barriers to psychological help-seeking. Research has substantiated that such barriers (i.e., social norms, stigma, and lack of anonymity) seem to contribute to rural underutilization of mental health services.

The social norms and values of rural communities are one potential deterrent to seeking and receiving mental health services. Wagonfeld (2003) has suggested that rural communities tend to value self-reliance, conservatism, distrust of outsiders, religion, work orientation, emphasis on family, individualism, and fatalism. Slama (2004) has created three larger concepts to describe rural culture, which more or less subsume Wagonfeld's values: conventional beliefs, isolation, and rural poverty. Slama argues that the conventional beliefs typically seen in rural communities were borne out of necessity—that is, individuals living many miles from the nearest community have necessarily learned to embrace a careful and considered approach to living. Though

adaptive for survival, conservative values (e.g., self-reliance) do not typically lend themselves to help-seeking. Isolation applies more to access than it does to utilization (as is detailed above); yet rural poverty is likely another contributing factor to poor utilization in rural communities. According to Slama, rural communities often offer fewer full-time employment opportunities, and thus fewer opportunities to obtain health insurance through one's job. The median income in rural communities falls below the national median, and rural communities have higher poverty rates than non-rural communities (US Census Bureau, 2010). Finally, Human and Wasem (1991) suggest that generational lack of knowledge about emotional disorders and services also contributes to underutilization of mental health services.

Stigma is a second underutilization factor in rural communities. According to Gamm (2004), intense stigma is often attached to seeking mental health services in rural communities, and as discussed above, stigma has found to be negatively correlated with help-seeking. This stigma could have roots in the rural values described by Wagonfeld (2003): emphasis on hard work and self-reliance ("I should be able to work this out on my own"), emphasis on importance of family, ("Mental health concerns are a family matter, and they're nobody else's business"), and conformity to group norms ("People around here don't use 'shrinks' "). Vogel et al. (2005) demonstrated that social norms are predictive of psychological help-seeking attitudes and intent to seek psychological help; thus if the social norm of rural communities includes stigmatizing psychological help-seeking, it would follow that many would be deterred from seeking help based on perceived societal pressures.

A factor that intensifies stigma among rural individuals is lack of privacy and confidentiality. Because rural communities are small and relatively closed, people tend to notice a great deal of what other people are doing. Slama (2004) labels this a “goldfish bowl” effect—“in which ruralites are aware that other people are very interested in their lives and in talking to others about them” (p.10). It is not uncommon for individuals living in rural communities to be able to recognize each other’s automobiles; thus even parking at a mental-health service can become a confidentiality concern. Other potential anonymity concerns, such as being seen by an acquaintance in the waiting room, are also likely in a rural community (and intensified due to the “goldfish bowl” effect). The potential for dual roles among rural practitioners is high; for example, a likely scenario could involve a young man needing mental health services, but the only provider in the area is his best friend’s mom. Scenarios such as these of course detract from the young man’s anonymity, should he decide to seek or be forced to seek local services. Additionally, this author has first-hand knowledge of the difficulty of keeping health information private in rural communities; although HIPAA laws do apply to rural hospitals and clinics just as strongly as they do to urban locations, keeping health information private and only disclosing on a need-to-know basis appears to be a special challenge in rural communities (Bitz, 2008).

These deterrants (i.e., lack of access, social norms, stigma, and lack of anonymity), are thought to prompt youth in rural communities to attempt coping with problems on their own or rely solely on informal helpers (e.g., religious leaders, teachers, or parents) (Cutrona et al., 1996; Kelleher et al., 1992). When the factors that affect help-seeking in rural areas are considered together (i.e., more psychological help-seeking

stigma, social norms of not seeking help for mental illness and self-reliance, different perceptions and definitions of mental health), it would seem likely that college students from rural communities may report lower scores than urban students on a measure of psychological help-seeking attitudes, and that more negative help-seeking attitudes may play a role in those students' adjustment. Because this hypothesis has not yet been substantiated by research, help-seeking is a pivotal construct in the current study's analysis. Given the extensive accumulated evidence on the negative relationship between stigma and help-seeking attitudes, and also the finding that help-seeking attitudes predict help-seeking intent (Vogel et al., 2005), only information on help-seeking attitudes is included in this study's analysis.

*Summary of psychological help-seeking and college adjustment.* Scholarship on psychological help-seeking has considered many factors that may contribute to it, such as willingness to self-disclose (Kelly & Achter, 1995; Vogel et al., 2007; Vogel & Wester, 2003; Vogel et al., 2005) and predicted utility of counseling (Vogel et al., 2005), among others. Research is in agreement that mental illness stigma has a negative effect on help-seeking behaviors (Celluci et al., 2006; Komiya et al., 2000; Vogel et al. 2007; Vogel et al. 2005). Less research has focused on how psychological help-seeking behaviors and attitudes may affect college adjustment; the few studies in this area have found that help-seeking behaviors (i.e., participating in counseling) positively contribute to college adjustment (DeStefano et al., 2001) and to college persistence (Wilson et al., 1997). In regards to rurality and psychological help-seeking, there is a disparity between adolescents who report a problem and those perceive a need for help (Sears, 2004), which may be the result of different definitions of "mental health problem" (Chimonides &

Frank, 1998; Kleinman, 1988). There is also a disparity among rural adolescents between those who perceive a need for help and those who actually seek help (Sears, 2004), likely the result of a multitude of factors, including lack of access to mental health providers (Sears et al., 2003), perceiving psychological services as unacceptable (Human & Wasem, 1991), stigma (Gamm, 2004), and social norms (Vogel., et al., 2005). Based on the factors examined above, it is predicted that rural adolescents will report more negative help-seeking attitudes than urban students.

#### *Social investment and college adjustment*

The construct of social investment at college, as defined as “time available and motivation to initiate and maintain social ties at college” is a new contribution to the literature on college adjustment. Prior research has tapped into the basic ideas behind the construct of social investment, and to constructs that are similar (i.e., social capital theory, which is discussed below) but no studies to date have conceptualized a “social investment” as a stand-alone construct and measured it as such. Inspiration for this construct comes from Medalie (1981), who stated that one developmental task for first-year college students involves “both *divestment* of the past and *investment* in a new life” (p. 75). The proposed social investment at college measure attempts to assess both divestment and investment.

Social investment is closely related to social capital theory. Though the term “social capital” has been used diversely and loosely among scholars of sociology, psychology, and other social sciences, Coleman’s definition (1988) of social capital is credited as being the most influential across fields (Kao, 2004). Coleman has stated that social capital is a form of resource that exists in relationships between people. “Social

capital...comes about through changes in the relations among persons that facilitate action” (p. 100). According to Coleman, there are three basic forms of social capital: obligations and expectations, information channels, and social norms. The first of these, obligations and expectations, comes from the idea that an individual’s relationship with another person comes with responsibilities to and from the other person. In simple terms, if a student lends a friend \$10, the student can reasonably expect that the friend would be willing to lend her \$10 in the future. This form of social capital is the one that is most closely linked to the construct of social investment in that the more social obligations and expectations that a college student has to communities and people *outside* of the university, the less social capital they have to invest and draw from at college. Having more obligations outside of college, in turn, is predicted by this author to have a negative impact on a student’s overall adjustment to college.

The main difference between Coleman’s social capital and social investment as defined by this author is in the details: social investment does not include (direct) emphases on information channels or social norms. However, it is easy to see how obligations and expectations may influence one’s ability to form information channels (i.e, more obligations outside of college may lend itself to less information channels at college), and social norms (i.e., one may continue to abide by the social norms of place of origin, rather than college norms, based on obligations to place of origin or people in that community). These relationships, while intriguing, are well outside of the scope of this research project and can only be speculated about. A secondary difference between social capital theory and social investment is that the social investment construct as articulated by this author includes an individual’s motivation or desire to socially invest at college.

Social capital theory traditionally does not focus on intention to invest, only on investment per sé.

How students' level of social investment affects their college adjustment is as of yet untested, as this is a new construct of interest. In spite of this, studying concepts closely related to social investment may help provide some understanding of how it may relate to college adjustment. In terms of social capital, Wells (2008) has found that social capital is positively associated with college retention among college students of a variety of races and ethnicities. Wells also found that some minority groups, most markedly Latino/a students, reported significantly less social capital at college. Another example of a construct similar to social investment (or lack thereof) is "friendsickness" as conceptualized by Paul and Brier (2001). These authors define friendsickness as "grieving the loss of precollege friends." Results from their study illustrated that participants who experienced moderate to high levels of friendsickness at college also reported moderate to high levels of social concerns at college. This study provides evidence that students who are struggling to maintain precollege friends do not adjust as well to college.

Studying social investment and its relationship to college adjustment may be especially relevant to understanding the rural student's college adjustment experience. Nora et al. (2006) found that among minority freshman, the biggest barriers to college persistence (one aspect of adjustment) are off-campus familial and job responsibilities. Based on the literature that has found that rural adolescents are particularly close to their families (Esterman & Hedlund, 1994), generally have remarkably cohesive peer groups from their hometown (Laursen & Collins, 1994), and may have obligations to return to

the rural community after college (Haller & Virkler, 1993), and on the findings of Nora et al., it can be surmised that a rural student's social investment at college may be less than that of a majority first-year student.

*Summary of social investment and college adjustment.* Social investment, a new construct being introduced in this study, is closely related to social capital theory as articulated by Coleman (1988). The main difference between the two concepts is that social investment focuses only on obligations and also takes motivation to invest into account. Studying concepts that are much like social investment, such as social capital, can add insight to the expected role of social investment in college adjustment. Social capital has been found to relate to college retention (Wells, 2008). Another similar construct, friendsickness, has been found to be associated with lower levels of adjustment to college (Paul & Brier, 2001). Certain characteristics of rural adolescents, namely the uniqueness of their hometown peer groups (Laursen & Collins, 1994), emphasis on family (Esterman & Hedlund, 1994), and obligations to return "home" after college (Haller & Virkler, 1993) suggest that rural adolescents may have a more difficult time investing in new social lives at college. Because Nora et al. (2006) has demonstrated that one of the biggest barriers to college persistence is off-campus familial and work responsibilities, it is important to consider the role of social investment in college adjustment, especially for the rural student.

Furthermore, it is crucial to consider what other factors may contribute to college students' well-being, at college. This topic is examined in-depth in the following section of this review.



### *Well-being and college adjustment*

Much of the past research focusing on “psychological well-being” among college students is actually measuring distress or psychological disturbance of participants (e.g., Cooke, et al., 2006; Kerr et al., 2004). In essence, these studies attempt to tap into a *lack* of well-being. However, whereas constructs such as psychological disorder and stress can be thought of as “risk factors” for college adjustment, *well-being* can be conceptualized as a “resilience factor.” Resilience, as compared to risk, has been studied relatively less, regardless of discipline or topic. This may be because resilience is a harder construct to define. Many scholars (e.g. Rutter, 1987) agree that resilience has to be more than the “flip-side” of risk; well-being may in fact be more accurately thought of a construct distinct from psychopathology (Eklund, et al., 2011), yet both psychopathology and well-being contribute to the larger concept of human functioning. In line with this argument, Ryff and Singer (2006) argue for a eudemonic approach to the construct of psychological well-being. In other words, psychological well-being is more about a sense of living in accordance with one's deeply held values, feelings of self-acceptance and purpose in life, and feeling holistically fulfilled in oneself and in relationships with others than it is about a lack of depression, anxiety, stress, and so forth. Robitschek and Keyes (2009) have argued for the inclusion of two other types of well-being in their multidimensional mental health model: hedonistic well-being, characterized by frequent and enduring positive affect, low levels of negative affect, life appraisals that are satisfying (Kahneman, Diener, & Schwartz, 1999) and social well-being, or the quality of relationships with others and the community. Though some overlap between the three dimensions of well-being, evidence suggests that the dimensions are distinct from one another (Keyes, Schmotkin,

& Ryff, 2002). This study embraced Robitschek and Keyes's model of multidimensional mental health (synonymous with this author's definition of "well-being") and took a strengths-based, rather than deficit-model, approach to studying mental health of participants and its possible role in affecting college student adjustment. Several relevant psychological constructs related to well-being (i.e., resilience factors) are considered and reviewed below.

*Self-esteem and related concepts.* Self-esteem, or a person's appraisal of their own self-worth, is a resilience factor that consistently appears in the literature on college adjustment. This variable has been almost universally supported in studies as a significant contributor to the positive adjustment of first-year college students. Bettencourt et al. (1999) found that personal self-esteem had a positive effect on adjustment scores. Additionally, Bettencourt et al. went beyond personal self-esteem and included the notion of a collective self-esteem, or the level to which individuals positively appraise groups that they belong to, and found that a greater sense of collective self-esteem was also related to enhanced adjustment to college. Similarly, in a study of White and Hispanic freshmen by Toews and Yazedijan (2007), self-esteem was the most significant predictor of adjustment, more so than parental support and other personal attributes. Numerous other studies have found a positive relationship between self-esteem and college adjustment (e.g., Friedlander et al., 2007; Mooney et al., 1991; Wintre & Sugar, 2000). Furthermore, some research has focused on the lack of self-esteem, and has found that low-self esteem also comes with consequences for college students. Low-self esteem has been found to be related to a greater number of health problems and to more frequent

negative moods (Pritchard, et al., 2007), and an increased sense of friendsickness, or mourning the loss of pre-college friendships (Paul & Brier, 2001).

The literature seems to be in a general agreement: self-esteem plays an important role for students as they adapt to college life, with higher self esteem lending itself to greater adjustment. Similarly, researchers have addressed constructs akin to self-esteem in regards to how they relate to college adjustment. For example, Martin et al. (1999) examined the contribution of self-confidence and found that more personal confidence was related to greater college adjustment. A study by Boulter (2000) analyzed multiple aspects of self-concept, or how students perceived themselves in different areas of their lives, and found that self-concept was a predictor of college adjustment. In other studies, self-efficacy, or the belief in one's ability to succeed, was found to be related to more effective coping and enhanced adjustment (Phinney & Haas, 2003; Silverthorn & Gekoski, 1995). In sum, variables that relate to the way a student appraises him or herself appear to be related to overall adjustment to college. Bearing that in mind, one must consider whether other personal characteristics of students affect their college adjustment.

*Optimism.* Like self-esteem, optimism is a personal characteristic has been consistently found to be related to college adjustment. Optimism correlates positively with self-esteem (Montgomery, Haemmerlie, & Ray, 2003), and self esteem has consistently been found to be related to college adjustment (as detailed above). Montgomery et al. also found that higher optimism scores were related to lower scores on a measure of loneliness. In a study by Pritchard et al. (2007), students who were more optimistic also reported fewer psychological disturbances and health complaints.

Pessimism has also been considered. A study by Chang (1996) found that pessimism was related to poorer physical outcomes, whereas Newby-Fraser and Schlebusch (1997) found it to be strongly related to negative emotions among college students. Overall, the research suggests that optimism has a positive impact on college adjustment.

*Locus of control.* Another resilience variable that has been studied in relation to college adjustment, though far less than other intrapersonal variables, is locus of control. Locus of control refers to an individual's tendency to attribute life events to being under his or her own control (internal locus) or out of his or her control (external locus) (Rotter, 1966). Research by Mooney et al. (1991) observed that an internal academic locus of control was significantly correlated with overall college adjustment, and with each subscale of the SACQ (personal-emotional, social, academic, and institutional adjustment). Similarly, a phenomenological study by Tognoli (2003) suggested that students who were more homesick (and hence, presumably less adjusted to college) displayed less internal loci of control. Yet even within the small body of knowledge on locus of control and college adjustment, disagreement surfaces. Estrada, Dupoux, & Wolman (2006) found that an *external* locus of control was related to higher levels of adjustment; in other words, students who felt that they had less control over situations in their lives reported being more adjusted to college life. The authors state that this result may have been observed because they only studied personal-emotional and social adjustment to college, as opposed to academic and other types of adjustment. The mixed findings on locus of control and adjustment suggest that this relationship may not yet be fully understood.

*Coping factors.* Certain coping orientations result in better student outcomes than others. Active coping (i.e., problem-focused, cognitive reinterpreting) has been reported to relate to higher adjustment scores (Crockett et al., 2007; Feenstra et al., 2001), better psychological outcomes (Sasaki & Yamasaki, 2007), and high levels of adaptation in the area that participants were working to cope with (Pizzolato, 2004). Adaptive perfectionists (Rice & Lapsley, 2001) and students who are more hopeful (Chang, 1998) have been shown to adopt an active coping style. Students who identify as using passive coping techniques (i.e., denial or avoidance), on the other hand, report having higher levels of depression and college stress (Crockett et al., 2007; Dyson & Renk, 2006), and were only able to adapt well to one or two narrow arenas of college life (Pizzolato, 2004). Dyson and Renk (2006) found no gender differences in active versus passive coping styles.

Certain attributes in students may contribute or diminish a student's coping capacity. In Chang (1998), a group designated as high in hope had several positive coping attributes: a more positive orientation towards problems, higher scores in rational problem solving, and lower scores in avoidant coping style. In contrast, low-hope students more likely to use coping skills that are considered to be less healthy, such as wishful thinking, self-criticism, and social withdrawal as means of coping. Also, hope scores uniquely predicted life satisfaction. Pessimistic students and those who felt they had a low coping capacity, (Newby-Fraser & Schlebusch, 1997), as well as those who reported lower perceptions of self-efficaciousness (Phinney & Haas, 2003) found less success through their coping attempts. A student's hardiness may also play an important

role in his or her capacity to cope. Mathis and Lecci (1999) observed that hardiness predicted mental health even more than it predicted physical health.

Students who use more social support may be more successful in their coping. Pizzolato (2004) found that students who sought emotional support before taking action achieved the highest levels of adaptation across multiple arenas of college life (more so than students who used passive coping or active coping without support).

*Other psychological and health behaviors.* A few other resilience variables have garnered some, but not much, attention in regards to their relationships with college adjustment. In a broader study of psychological variables, Wintre and Sugar (2000) used the Big Five Personality factors (i.e., openness, conscientiousness, extraversion, agreeableness, and neuroticism—a combination of risk and resilience variables) to learn more about individual differences in college adjustment. Extraversion was significantly correlated with social adjustment across all participants, and conscientiousness was related to higher levels of academic adjustment and institutional attachment. Yet neuroticism (a risk variable) was related to lower adjustment levels only for females, and agreeableness was related to higher adjustment levels only for males. No differences were observed for openness. In terms of health behaviors and college adjustment, bedtimes, wake-up times, and frequency of strength training sessions all significantly related to college adjustment, in that earlier and later bedtimes were related to higher adjustment, as was more weight lifting sessions (Trockel et al., 2000).

*Summary of well-being (resilience) factors and college adjustment.* Research has illustrated that several different concepts, including self-esteem (e.g., Bettencourt et al., 1999; Toews & Yazedijan, 2007), optimism (Chang, 1996; Montgomery et al., 2003;

Newby-Fraser & Schlebusch, 1997), locus of control (Estrada et al., 2006; Mooney et al., 1991; Tognoli, 2003), active coping (e.g., Crockett et al., 2007; Feenstra et al., 2000), some Big Five Personality factors (Wintre and Sugar, 2000), and health behaviors (Trockel et al., 2000) may serve as resilience factors for college students and their college adjustment. Yet as mentioned above, the majority of research on “psychological well-being,” has actually focused on “lack of well-being,” or risk factors. Despite its theoretical difference from resilience research, much about college adjustment can be learned from the risk/mental disturbance literature. Thus, various adjustment maladjustment factors are considered below.

*Stress and stressors.* Many studies about college students have focused on what students perceive to be stressful. Academic stressors such as tests, grades, professors, class environment, concerns about future success and careers, and increased class workloads have been endorsed by students as stressful (Archer & Lamnin, 1985; Ross, Niebling, & Heckert, 1999), and personal stressors have included intimate relationships, interpersonal conflicts, financial concerns, changes in health habits (e.g., sleeping and eating), and breaks from school (Archer & Lamnin, 1985; Ross et al., 1999). A study by Newby-Fraser and Schlebusch (1997) found situational demands were more strongly related to emotional symptoms than life events, but internal stressors (i.e., lack of coping capacity and pessimism) were most highly related to negative emotions. Although there is a large body of research on alcohol use in college (e.g., Celluci et al., 2006; Haemmerlie et al., 2004), a study by Ross et al. found that changes in alcohol or drug use were not commonly cited by students as stressors. In sum, students perceive many

aspects of college life to be stressful, but alcohol and drug use may not be perceived in this way.

*Homesickness and separation, and loneliness.* A few studies specifically address the role of homesickness and how it relates to college students' mental health. As mentioned earlier, Lapsley et al. (1989) reported that freshmen displayed higher levels of psychological dependence on parents, and separation concerns hindered college adjustment. In this study, women displayed greater amounts of psychological dependence than men. Similarly, Beck, Taylor, and Robbins (2003) found that individuals who reported being more sociotropic (i.e., those who expressed having high needs for affiliation, intimacy, and dependency) struggled more with homesickness concerns. Tognoli (2003) observed that first year college students whose parents lived farthest away reported greater levels of homesickness and showed lower scores on measures of self-esteem, ego identity and internal locus of control.

As with homesickness, loneliness has generally been shown to increase during the transition to college (Larose & Boivin, 1998). Larose and Boivin found an interaction between attachment to parents and loneliness in college students: for those who left home to attend college, feelings of loneliness were predicted by perceived insecurity in attachment to mother, whereas for those who stayed at home during college, perceived insecurity in attachment to father predicted loneliness scores. Loneliness has also been shown to be related to social anxiety (Larose & Boivin) and psychosomatic symptoms (Newby-Fraser & Schlebusch, 1997). Overall, research supports the idea that first-year college students struggle with homesickness, separation, and loneliness.



*Depression and anxiety.* Depression and anxiety appear to be closely related to homesickness, and to each other. Greater reports of sociotropy (see discussion on sociotropy above) relate to both an increase in depression and in homesickness (Beck et al., 2003), and similarly, increased homesickness has been shown to relate to higher levels of psychological disturbance, including depression and anxiety (Fisher & Hood, 1987). On the other hand, increases in self-esteem have been shown to decrease depressive symptoms (Friedlander et al., 2007). While many studies, such as those discussed above, have focused on highlighting the correlates of these disturbances, other studies have investigated the trajectory of depression and anxiety symptoms during the college transition. Larose and Boivin (1998) discovered that even though perceived security to parents and attachment style remained stable during the college transition, feelings of social anxiety significantly increased during this time. The findings of Cooke et al. (2006) complicate the finding of Larose and Boivin. Cooke et al. found that students had curvilinear levels of depression, with low levels of stress and anxiety at the beginning and end of the school year, and an increase at the end of the first semester. Anxiety levels at the end of the year were lower than they were pre-college, yet depression scores remained higher than pre-college scores. The research seems to be in agreement: depression and anxiety are both common disturbances amongst college students.

*Alcohol use.* Alcohol use among college students is a common focus of psychological research. The popular urban myth that college students who come from restrictive homes “go wild” upon entering college was examined by Hersh and Hussong (2006). This study’s results did not support the myth; it found that students’ high school drinking style was much more predictive of college drinking than was a restrictive family

of origin. The authors suggest that learning to use drinking as a coping mechanism happens in high school and that college drinking behaviors are merely an extension of these already-learned behaviors. Another project found that using alcohol to cope with problems predicted frequency of alcohol intoxication at the end of the academic year (Pritchard et al., 2007).

Several factors may predict a students' likelihood to use alcohol. Finding comfort in religion has been shown to be negatively correlated with frequency of alcohol intoxication, and students who identified as being perfectionistic or extroverted also tend to drink alcohol more frequently (Pritchard et al., 2007). Haemmerlie et al. (1994) found that having high levels of conflict with parents was related to an increase in alcohol use. Gender has also been explored as a possible predictor of alcohol use or effects. Fletcher and Skinner (2006) stated that although no differences were found in frequency of drinking, knowledge about effects of alcohol, and motivations for consuming alcohol, men were more likely to drive under the influence, get in a car with an intoxicated driver, damage property, break the law, injure someone else, and engage physical or verbal confrontations, whereas women more likely to become excessively emotional or cry. Thus, alcohol does appear to be used as a coping mechanism in college, but this method is often already learned by the time a student arrives at college. Various personal characteristics, such as being religious, being introverted, and avoiding risks, may decrease use of alcohol as a means of coping. Also, some gender differences may exist in terms of alcohol use.

*Other psychological factors.* Kerr et al. (2004) studied alexithymia, or the state of being confused by emotional reactions or having difficulty figuring out what exactly one

is feeling. They found that students who were experiencing alexithymia judged the adjustment to college to be more difficult, and reported lower adjustment scores, than students who did not experience alexithymia. As discussed in more detail in a previous part of this review, anti-intellectual attitudes are associated with poorer academic, institutional, and general adjustment (Hook, 2004), and certain types of perfectionism may also have a negative impact on adjustment, especially personal-emotional adjustment (Rice & Lapsley, 2001).

*Summary of psychological disturbance (risk factors) and psychological adjustment.* Though many factors contribute to students' adjustment to college, research demonstrates that there are also many factors that may diminish a student's ability to adjust. Academic and personal stressors (Archer & Lamnin, 1985; Newby-Fraser & Schliebush, 1997; Ross et al., 1999), homesickness and loneliness (Beck et al., 2003; Lapsley et al., 1989; Larose & Boivin, 1988; Tognoli, 2003); mental health problems (i.e., depression, anxiety, alcohol use and abuse, and alexithymia) (Beck, 2003; Cooke et al., 2006; Fisher & Hood, 1987; Friedlander, 2007; Hersh & Hussong, 2006; Kerr et al., 2004), and other psychological factors such as perfectionism (Pritchard et al., 2007) are risk factors for a lower level of college adjustment. Knowing what issues have the potential to interfere with college adjustment is informative, and having an idea of what issues may be especially salient to a rural population is also important to examine. Rurality and its relationship to risk and resilience factors are considered below.

*Well-being and rurality.* The contribution of well-being as a resilience factor and positive contributor to the overall and college adjustment of rural adolescents has not yet been the subject of scholarly scrutiny. Most studies of mental health among rural youth

focus solely on disturbance, thus only information on mental health problems (risk) is included in this section.

Many factors are relevant when it comes to mental health among rural adolescents. According to Nordal, Copans, and Stamm (2003), approximately twenty-three percent of rural youth live in poverty and 15 percent do not have health insurance. Rural adolescents may feel less vulnerable to the threat of HIV, as this disease is less prevalent in rural communities; thus, risky sexual practices are more common, and HIV has the capacity to spread rapidly and unexpectedly through small communities (Nordal, Copans, & Stamm). These youths have been found to report higher levels of loneliness and feeling isolated or alienated (Woodward & Frank, 1988; Woodward & Kalyan-Masih, 1990). Drugs, with a preference toward tobacco and alcohol, are easy to acquire: 71 percent of rural youth report that drugs are obtainable. Of these drugs, alcohol has garnered the most attention and research, and the literature highlights that alcohol use and abuse is problematic in rural communities: alcohol abuse (18.5%) and alcohol dependence (19.3%) are the most common psychiatric disorders among rural young adults (Rueter, Holm, Burzette, Kim, & Conger, 2007). Wilson and Donnermeyer (2006) found several correlates of substances use in rural communities. Substance abuse was less prevalent in families that prohibited substance use and were involved in school activities, but amount of "care" shown in families was not related to overall substance use. Discussing substances with rural youth was related to higher amounts of overall use, whereas discussion of this type did not change substance use in urban adolescents. Students who drink heavily may perceive that their drinking is not a severe enough problem to warrant needing psychological help (Cellucci et al., 2006).

*Summary of psychological well-being and rurality.* As is demonstrated above, most of the research on rural communities and wellbeing has focused on concepts that detract from individuals' wellbeing, rather than contribute to it. Factors such as poverty, lack of health coverage, and risky sexual practices (Nordal, Copans, and Stamm, 2003), loneliness (Woodward & Frank, 1988; Woodward & Kalyan-Masih, 1990), and drug and alcohol use (Rueter, et al., 2007) are problems that are especially pressing for many rural adolescents.

*Overall summary of well-being.* As the entirety of the previous section demonstrates, much, if not most of, the research on "well-being" has actually focused on distress or psychological disturbance. Certainly, much can be learned through studying psychological disturbance factors; yet, because the role of disturbance has so often been a focus of research on college adjustment and of rural youth, this study seeks to provide a different angle on the understanding of rural students at college, and of first-year students at college, by specifically focusing on well-being as defined by Robitschek and Keyes's model of multidimensional mental health, which includes hedonistic well-being, characterized by frequent and enduring positive affect and low levels of negative affect, life appraisals that are satisfying (Kahneman, Diener, & Schwartz, 1999), and social well-being, or the quality of relationships with others and the community. (In line with this definition, exploring the contributions of social support, social self-efficacy, psychological help-seeking attitude, and social investment at college as they relate to and/or predict well-being seems to be indicated.) As many scholars (e.g. Rutter, 1987) agree that resilience has to be more than the "flip-side" of risk, and that well-being may in fact be more accurately thought of a construct distinct from psychopathology (Eklund,

et al., 2011), approaching well-being from this angle will provide a fresh and informative, strengths-based, perspective on first-year student experiences.

### *Rurality*

Though information on the substantiated or possible relationships between the various constructs of interest and rurality have been examined in the previous sections of this review, more general scholarship on rural communities and adolescents living in those communities is also important to consider. Knowing as much as possible about the lives of adolescents living in rural communities helps provide a deeper understanding of these students, which may provide added perspective on their college transition experiences.

A number of studies have considered the implications of living in a rural community. As has been discussed in relation to help-seeking attitudes, scholars (Murray & Keller, 1982; Slama, 2004; Woodward, 2003) have suggested that rural communities often share different cultural values than urban and other United States communities. These values include an emphasis on hard-work and self-reliance, importance of family, and conformity to group norms. Other studies support some of these general assertions. Esterman and Hedlund (1994), in a study about rural adolescents from farm families, found that this population of students tended to be particularly close to their families and reported strong work ethics. Additionally, Laursen and Collins (1994) observed that rural adolescents had small but exceptionally cohesive peer groups.

For the rural student, family factors seem to play an important role in a students' current educational achievement and aspirations. Russell and Elder (1997) reported that students from farm families performed significantly better in academics than other rural

students, suggesting that families high in parental involvement (e.g., farm families) are related to higher achieving students. Their study indicated that other family factors, such as community integration, seemed to make a difference in rural children's achievement. Families who were isolated from the community tended to have children who did not perform as well academically, whereas families whose parents were high on community involvement had children that performed at a higher academic level. It is uncertain from this report's findings as to whether the relationship of community integration to academic performance is direct or indirect: the parents who were most involved in the community were also the most educated, and families with more educated parents had children who performed better in school. It may be expected that the students who were performing better academically (and many farm students were perceived to do well academically; Russell & Elder) would be those most likely to pursue college degrees, but adolescents from farms may be less likely to pursue four-year degrees than other rural adolescents (Esterman & Hedlund, 1995). Yet the study by Esterman and Hedlund also demonstrates that farm adolescents indicated they were not likely to stay on the farm. Legutko (1998) observed that a rural adolescent's plans for higher education were more affected by familial educational attainment than by family financial situation: student college plans were strongly influenced by parents' educational attainment moderately influenced by sibling educational attainment. Family financial situation did not affect post-secondary plans. In considering these results together, choosing and pursuing a non-agricultural career may prove to be especially difficult for the farm-raised adolescent, especially with the rural emphasis on family orientation and following in the educational or vocational "footprints" of parents. The feeling that one has "gone against tradition" or "abandoned

the family,” may contribute to maladjustment or psychological disturbances during the transition to college.

In terms of where rural students prefer to live after graduating high school, a longitudinal study by Johnson, Elder, and Stern (2005) reported that overall, residential preferences of students were related to where they later resided or pursued higher education; in other words, students who planned to stay near home generally stayed, and those who intended to leave usually moved away. However, these preferences were not related to eventual socioeconomic attainment. These findings suggest that students who chose to remain in or near the rural community did not make significantly more or less money than those who preferred to move away.

Another way to better understand distinct attributes of the rural adolescent would be to compare them to their urban counterparts; unfortunately, the results of Haller and Vickler (1993) Zimbelman (1987) contradict each other. According to Zimbelman, rural adolescents anticipated pursuing less prestigious careers and completing fewer years of postsecondary education. Twice as many urban youth planned to pursue professional careers. Yet, this study found no significant differences in locus of control or motivation to achieve. Haller and Vickler, in contrast, found only minute differences in the aspirations of rural and urban youth, and results suggested half of the existing difference could be explained by differences in SES. Haller and Vickler further assert that rural youth do not plan to pursue high-level professional jobs as often as urban youth because these types of jobs are relatively uncommon in rural communities. In addition, they state that encouraging rural students to consider these high-level jobs contributes to urban migration and the “brain drain” of rural communities.



In sum, making any broad generalizations about aspiration differences in rural (as compared to urban) youth is difficult, based on the limited and dated research available in this area. Many of the studies on aspects of rural life and people from rural areas date back ten years or more, to the late eighties and early nineties (e.g. Coleman et al., 1989; Esterman & Hedlund, 1994; Haller & Vickler, 1993; Keller & Murray, 1982; Laursen & Collins, 1994; Looker & Dwyer, 1998; Russell & Elder, 1997; Woodward & Frank, 1988; Zimbelman, 1987). It appears that the research on rural culture was in its “heyday” during the Farm Crisis of the early 1990s, and has since fallen out of favor in the psychological community. Yet this author argues that even if no economic crisis is currently pressing, the culture of rural communities must not be neglected in psychological research.

*Rural to urban transition.* A few studies have examined transitional experiences of those who migrate from rural to urban areas, and these studies may be crucial to a heightened appreciation of a rural student’s transition to an urban university. Bramston and Patrick (2007), who studied focus groups of students who had moved from rural Australia to urban boarding schools, discovered that all students perceived that their move enhanced their educational opportunities. Leaving family and friends was universally endorsed as a stressor, and many females spoke of the lack of privacy in the new urban environment as stressful. Students stated that they coped by talking with others, and suggested that more parent contact for students, being “buddied up” with an older student, and making dorms more “homey” would be ways to make the transition easier.

Two similarly designed studies examine experiences of rural youth who left their homes in rural areas to seek opportunities in urban areas. Gabriel (2006) focused on youth in Tasmania. The students perceived cultural gaps opening up between themselves and their families after leaving home, and their sense of personal advancement and change was both a source of pride and shame. Students expressed concern about becoming the type of person their families had always disparaged: educated but lacking practical skills, devaluing family life, self-centered, and self-righteous. The students also perceived many differences between their life paths and the more "traditional" (circa 1950s) life paths of peers who remained in rural areas. A study of analogous design by Wiborg (2001) focused on young women in Norway who had left rural communities to attend an urban university. These women defined themselves in terms of what was different from the rural status quo: not wanting to "settle down" and have children right away, and obtaining a higher education. These women saw their lives as changing, whereas they perceived the rural life to be "stagnant." In both of these studies, cultural differences between an individual's past, "rural self" and new "urban self" emerged, and participants were able to perceive and articulate these differences.

These studies make important contributions to the field of knowledge on rural to urban transitions, but they also possess drawbacks and limitations. First, these studies are all qualitative in nature. This method provides the academic community with a rich, deep look into the experience of youth transitioning from rural to urban areas, but it is unknown as to how well these experiences will generalize to the experiences of other students. Also, these studies were all conducted outside of the United States, making the chances of generalizability to United States youth even more questionable.

*Rural students in college.* As stated in Chapter 1, nearly a quarter (22%) of the nation's youth attend rural schools (Johnson & Strange, 2007), and many of these students end of being college bound. Rural students in college have been considered in a few studies, although most studies only focus on one aspect of the rural-urban difference. For example, Fletcher and Skinner (2006) and Schultz and Neighbors (2007) both concentrated on differences in alcohol use between rural and urban students in college. Fletcher and Skinner observed that there were no significant differences in number of drinking occasions, but Schultz found that rural students do drink more than urban students in college. Schultz suggests that this difference relates more to drinking norms and cultural values from their rural hometowns more than it relates to rural students being more susceptible to college drinking norms. It is striking that two of the few studies focusing on differences in rural and urban students in college focus only on alcohol use differences. Though research on alcohol use and abuse is certainly necessary and informative, it is likely that other important aspects of rural students' struggles, as well as their resilience, are being missed due to an overemphasis on the "drinking problems" of college students from rural areas.

Two studies have focused on non-alcohol related rural and urban differences in college students. One of these is Kirby and Conlon's (2005) analysis of rural and urban students' financial concerns in college. They found significant differences in income level; urban students were more likely to come from more affluent families. Both urban and rural students reported that cost of attending university was a concern, and no significant quantitative differences in terms of level of concern were found between the groups. Rural students were more likely to live with relatives while in college, and more

likely to spend more on rent, food, and personal items; whereas urban students spent more on vehicle expenses. Larger proportions of rural students used scholarships or federal loan programs. This study demonstrates how differences between rural and urban students may at times be attributed to financial or SES differences, as opposed to cultural variations *per sé*. A lower SES is often associated with students from rural areas (Nordal et al., 2003), and this factor can be looked at as either confounding or contextual.

Finally, a study by Looker and Dwyer (1998) explored general differences between rural and urban students in higher education in Canada. This longitudinal study, an important contribution to the field of knowledge on the topic at hand, resulted in many findings. Students from rural communities, overall, did not stay in educational settings for as many years as urban students did, and fewer rural youth went on to post-secondary education at all. More rural than urban students had experienced marriage or parenthood at the time of the last data collection (3-4 years after senior year of high school); additionally, at this data point, those from rural areas were more likely to be unemployed or experience frequent movement in and out of employment. The authors of this study make compelling arguments against the linear “school-to-work” progression generally idealized by Canadian (and for that matter, United States) culture; about half of the youth in their study reported a combination of school and work immediately following high school. Looker and Dwyer also discuss implications of choosing college for the rural adolescent: “The decision about pursuing post-secondary education is a very different one for rural as compared to urban youth...it involves leaving community, family...there are higher costs, both financial and social” (p. 14).

*Summary of rurality.* Much must be taken into consideration when attempting to understand the experience of a college student from a rural community. First of all, rural adolescents may grow up in a place with differing values from the dominant culture. Family orientation (Esterman & Hedlund, 1994) and small and cohesive peer groups (Laursen & Collins, 1994) are reported to be part of many rural youth's way of life; thus, looking more specifically at first-year college students' social support, social self-efficacy, and social investment in their intersection with rurality at college appears to be warranted.

Additionally, intense stigma and lack of mental health providers may prohibit adolescents from seeking appropriate treatment (Nordal et al., 2003). Those who grow up in rural areas may even have different perceptions of what "mental health" means (Chimonides & Frank, 1998). An exploration of help-seeking attitudes among first-year college students might lend a more complete understanding of whether or not mental health stigma "comes with" rural students to college.

Finally, certain hallmarks of rural youth may lend themselves to different levels of overall well-being than their urban counterparts, including aspects such as: a) students who transition from rural to urban areas often perceive emerging cultural gaps between themselves and their families and friends who remain in their hometowns (Gabriel, 2006; Wiborg, 2001), b) rural students in college may be less likely than their urban counterparts to come from affluent families and may require more financial aid (Kirby & Conlon, 2005), c) rural students in college may be more likely to experience marriage or parenthood and may be more likely to be unemployed or have unstable employment (Looker & Dwyer, 1998), and d) for the rural student, going to college comes with many

costs, beyond financial, that are distinct for a person from rural culture (Looker & Dwyer, 1998).

## Chapter 3: Methods

### *Participants*

Approval for the proposed study was sought and obtained from the University of Nebraska-Lincoln's Institutional Review Board. Participants were 240 first-year, first-semester students at the University of Nebraska-Lincoln. Participants had a mean age of 18.42 with a mode of 18 years of age. One hundred and twenty were male (120, 50%) and 120 (50%) were female; likewise, the sample was nearly even in terms of students' objective rural versus urban locale (52% rural, 48% urban). Participants predominantly self-identified as White/Caucasian (226, 95%), though a small percentage of students self-identified as Black/African-American (2, 0.8%), Hispanic (1, 0.4%), Asian/Pacific Islander (4, 1.7%), Multiracial (4, 1.7%) and Other (1, 0.4%). Students not in their first year of college, transfer students, and students who have returned after a hiatus from college were excluded due to possible adjustment affects of their first college experience. As a large portion of the first-year college population was projected to be less than 19 years of age at the time of data collection, a waiver of parental consent for minors was requested and obtained from the IRB; thus, all first-year college students who otherwise met the inclusion criteria were eligible to participate without parental consent.

Participants were recruited via in-person visits to three large introductory Agricultural Sciences lecture classes and ten smaller Educational Psychology (i.e., child or adolescent development and human cognition) classes. The researcher obtained permission to enter all of these courses and speak to participants about her research. All students who met the criteria (first year, first-semester students) were invited to participate. Two hundred and forty-two questionnaires were completed. One

questionnaire was omitted from the analyses due to obviously false responses (e.g., hometown was listed as “nowhereville,” age as “old,” major as “screwing around” and the questionnaires were filled in such that all “a” or “1” answers were endorsed). Another was omitted due to the student endorsing “yes” on the item “Are you a transfer student?” All participants were able to enter their name in a drawing for gift certificates to local restaurants.

### *Instrumentation*

*Demographics and background information.* Basic demographics and background information was gathered from participants. This information included age, gender, race/ethnicity, relational status, socioeconomic status (mother’s and father’s educational attainment, dollar estimate of family of origin household income), and current living situation. Items asking a participants’ year in school, whether or not they are transfer students and if they have returned to college after a hiatus will be asked to ensure that inclusionary criteria for the study are met. (Also, see Appendix A.)

*Rurality.* A continuous rural variable was created in order to portray the varying degree of rurality in the sample as accurately as possible. (This variable is modeled after the rural variable created by Bettencourt, et al., 2008.) Rurality was assessed using a combination of two items: rural-urban county continuum codes (developed by the United States Department of Agriculture (USDA, 2004) and population of hometown (defined in participant directions as “town where you spent the most years growing up”). The USDA developed the rural-urban continuum codes as a classification scheme that distinguishes counties by population size, degree of urbanization, and adjacency to a metropolitan area (i.e., a location that has at least one “urbanized area” with over 50,000 people). The



codes range from 1 (“counties in metro areas of 1 million population or more”) to 9 (“completely rural or less than 2,500 urban population, not adjacent to metro area”). Thus under the USDA system, higher numbers correspond with an increasing level of rurality. For the purposes of this project, the USDA codes were reverse-coded so that lower numbers correspond with more rural areas (in order to be consistent with smaller town population sizes corresponding with more rural areas).

A second piece of information that feeds into this project’s rurality definition is population of hometown. The questionnaire asked participants for the name, state and zip code of their hometown, and then the hometown’s population was recorded by this researcher using 2000 Census data. The reverse-coded rural-urban continuum code and the hometown population variable was standardized then combined with the USDA code to arrive at a final “rurality” designator.

For dichotomous analyses (i.e., t-tests and model comparisons, that require “rurality” to be split into “rural versus urban,”) those participants who had a rurality score less than 7 were considered to be rural and 7 or greater were considered to be urban. This cut-off was chosen as it is consistent with the USDA cut-offs for “metro” and “non-metro” counties.

Additionally, in order to be able to compare “objective” (i.e., the “rurality” variable detailed above) definitions of rurality with subjective definitions, self-identification data were collected. One item assessed subjective self-definitions. Participants were asked to rate themselves on a scale from 1-100, with one pole representing “very rural” and the other “very urban.” A score of 50 was anchored for

participants at “neither rural nor urban.” For dichotomous analyses the bottom 50% was considered “rural” while the top 50% was considered “urban.”

*College adjustment.* College adjustment was measured using the Student Adaptation to College Questionnaire (SACQ; Baker & Siryk, 1984). The SACQ is a 67-item self-report questionnaire designed to assess student adjustment across various aspects of the college experience. The SACQ items are rated on a nine-point Likert-type scale, ranging from 1 (*applies very closely to me*) to 9 (*doesn't apply to me at all*). Higher scores are indicative of better adjustment to college.

The SACQ includes four subscales: 1) Academic Adjustment (24 items), which is used to assess the respondent's motivation, application, performance, and academic environment (e.g., “I have been keeping up to date on my academic work,” and “I am satisfied with the level at which I am performing academically”). 2) Social Adjustment (20 items), which focuses on adapting to other people in the college environment, as well as assessing feelings of homesickness (e.g., “I have several close social ties at college,” and “On balance, I would rather be home than here”). 3) Personal-Emotional Adjustment (15 items), which concentrates on intra-personal psychological and physical problems (e.g., “I haven't been sleeping very well,” and “I have been feeling tense or nervous lately”). 4) Goal Commitment/Institutional Adjustment (15 items), which assesses both a respondent's commitment to being in college and general, and commitment to the respondent's institution in specific (e.g., “I wish I were at another college or university,” and “Lately I have been giving a lot of thought to dropping out of college altogether and for good”). Some items are used in more than one subscale (e.g., “I feel I am very

different from other students at college in ways that I don't like" is an item included on both the Social and Institutional Adjustment subscale).

The SACQ was standardized on a large (>1000) sample of college students. Because a significant gender difference was found in subscales, separate norms were developed for men and for women. The full scale and subscales had acceptable reliability in this sample (Cronbach's alpha scores): .94 (full scale), .85 (academic adjustment), .89 (social adjustment), .82 (personal-emotional adjustment), and .88 (attachment). The four-factor model of adjustment has been demonstrated and supported through factor analysis (Baker & Siryk, 1984). Construct validity was established by Baker and Siryk (1989) by correlating the full scale and subscales of the SACQ with various measures that are indicative of college adjustment (e.g., GPA, social activities checklists, overall satisfaction at college, persistence, etc.). Criterion and construct validity have been confirmed in subsequent studies (see, e.g., Dahmus, Bernardin, & Bernardin, 1992).

*Social support.* Social support was measured with the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988). The MSPSS is a 12-item self-report measure designed to measure perceived instrumental and/or expressive provisions supplied by friends, family, or a significant other. Example items include "My family really tries to help me," (family subscale), "I have a special person who is a real source of comfort to me" (significant other subscale), and "I can talk about my problems with my friends" (friends subscale). A 7-point Likert-type scale with responses ranging from 1 (*very strongly disagree*) to 7 (*very strongly agree*) is utilized. Higher scores indicate higher levels of perceived social support.

The MSPSS had good internal consistency (i.e., reliability) in this sample; Cronbach's coefficient alpha for the total scale (.90) was high; subscale alphas were all above .88. Previous research has demonstrated test-retest reliability for the total, significant other, family, and friends scales (.85, .72, .85, .75, respectively), indicating adequate stability over time (Zimet, 1988). Further, factor analyses have validated that the three subscales are separate and distinct from one another (Canty-Mitchell & Zimet, 2000; Dahlem, Zimet, & Walker, 1991; Zimet, 1988). Zimet's (1988) finding that social support is negatively correlated with depression and anxiety demonstrates construct validity. Dahlem et al. (1991) found no evidence of a social desirability effect with this instrument.

This instrument is unique from other measures of social support in that it includes an evaluation of social support from a significant other. This may be of particular importance in its use with college students, who may experience increased support from adults outside the family due to moving away from home. The instrument is also particularly well-suited for research as it is parsimonious and simple to use and score.

*Social self-efficacy.* Social self-efficacy was measured using the Scale of Perceived Social Self-Efficacy (PSSE; Smith & Betz, 2000). This 25-item, self-report measure assesses "the individual's confidence in her or his ability to engage in the social interactional tasks necessary to initiate and maintain interpersonal relationships" (Smith & Betz, 2000, p. 286). Several areas of social interaction are addressed, including making friends, pursuing romantic relationships, social assertiveness, performance in public situations, groups or parties, and giving and receiving help. All items start with the stem "How much confidence do you have that you can..."; example items include "Start a

conversation with someone you don't know very well," and "Be involved in group activities." Items are scored on a 5-point Likert-type scale ranging from 1 (*no confidence at all*) to 5 (*complete confidence*). Higher scores on the PSSE indicate greater perceived social self-efficacy.

The PSSE displayed sound reliability in this sample (coefficient alpha= .96). Prior research has demonstrated that test-retest reliability after three weeks ( $r = .82$ ) is high. Smith and Betz's (2000) analyses also demonstrated that a single general factor best accounted for all of the items in the inventory. Significant positive correlations with related constructs, such as self-esteem, and significant negative correlations with constructs such as shyness and social anxiety, confirm the construct validity of the PSSE (Smith & Betz, 2000).

The PSSE was chosen because of its behaviorally-focused items (e.g., "Find someone to go to lunch with"), and also because of its intentional focus on social confidence and agency (other measures of social self-efficacy were inadvertent results of analyses of general self-efficacy measures, [see, i.e., Sherer, 1982]). Smith and Betz (2000) argue that many available measures of social self-efficacy are either "psychometrically inadequate or somewhat narrow in definition and scope" (p. 286).

*Social investment.* Social investment was measured using a questionnaire developed by this author, known in this study as the Barriers to Social Investment at College Questionnaire (BSIC). This is a 9-item, self-report measure designed to assess "time available and motivation to initiate and maintain social ties at college." The measure includes various types of items. One free-response item asks participants to give a number of "close, friends (including significant others) from back in your community

(e.g., hometown, high school community, neighborhood) who you contact or spend time with at least once/week.” One multiple choice item assesses how many times a participant would ideally go home if time and money were no object. Response options for this item, though it is multiple choice, are based on a range from 1 (*not at all*), to 8 (*I live at home [or would live at home if I could]*). A set of 5-point Likert-type items comprise the rest of the questionnaire, (e.g., “I have obligations to my family that I must attend to on a regular basis,” and “I am putting a great deal of energy into maintaining my friendships from high school.”) which is designed to assess obligations to others outside of college as well as motivation to invest in a new social life at college. The scale ranges from 1 (*disagree very strongly*) to 5 (*agree very strongly*). Higher scores on the BSIC indicate more barriers to social investment at college.

This study has been the inaugural use of this instrument, so psychometric properties were not previously established. Reliability for this sample was less than adequate, .57.

*Psychological help-seeking.* Help-seeking attitudes was measured using the Attitudes Toward Seeking Professional Psychological Help Scale- Short version (ATSPPH-S; Fischer & Farina, 1995). The ATSPPH-S is a ten-item, self-report questionnaire designed to measure attitudes about seeking psychological help. The shortened form is based on the original 29-item scale developed by Fischer and Turner (1970). Example items include “I would want to get psychological help if I were worried or upset for a long time,” and “A person should work out his or her own problems; getting psychological counseling should be a last resort.” Items are scored on a 4-point

Likert scale, with responses ranging from 0 (*disagree*) to 3 (*agree*). Higher scores indicate more favorable attitudes toward seeking professional psychological help.

Internal consistency (Cronbach's Alpha) for the ATSPPH-S in this sample was .81. Prior research reported the four-week test-retest reliability to be .80. Factor analysis demonstrated that one single, general factor best accounted for the data. Known-groups validity (i.e., those who had actually sought help versus those that had not) was also assessed; the point-biserial correlation between having sought help or not and the participant's scale score was .39 ( $p < .0001$ ). Fischer and Turner (1970) found no significant social desirability affect on the original 29-item form of the scale among anonymous participants.

*Well-being.* Well-being was measured with the Adult Mental Health Continuum-Short Format (MHC-SF; Keyes, 2009). This 14-item, self-report scale is designed to measure three dimensions of mental health: psychological, emotional, and social (all of which can be subsumed under the heading of "well-being" as this author defines it). All items start with the stem: "In the past month, how often did you feel..." Example items include "happy," (emotional well-being), "that you had something important to contribute to society" (social well-being), and "that your life has a sense of meaning or direction to it" (psychological well-being). Items are scored on a six-point Likert-type scale, ranging from 0 (*never*) to 6 (*every day*). Higher scores indicate higher levels of mental health/well-being.

The MHC-SF is derived from the 40-item long form of MHC (MHC-LF). The long form is comprised of seven items on emotional well-being, 18 items that measured the six dimensions of Ryff's (1989) model of psychological well-being, and 15 items that

measure the five dimensions of Keyes' (1998) model of social well-being. The 14 items included in the MHC-SF were thought to be the most prototypical items for each construct represented in the long form.

Reliability of the MHC-SF in this sample was .92, with all subscales demonstrating reliability above .90. In prior research the MHC-SF has demonstrated discriminant validity (Keyes, 2006). Test-retest reliability estimates at four weeks for the short form scales are reported to be .57 for psychological well-being, .64 for emotional well-being, and .71 for the social well-being (Robitschek & Keyes, 2009). The three factor structure of the MHC-SF has been confirmed in nationally representative samples of US adults (Gallagher, Lopez & Preacher, 2009), and notably, in college students (Robitschek & Keyes, 2009).

### *Procedures*

All data was collected between October 11 and December 13, 2010. This time period was chosen specifically to capture the maximum variance in student adjustment (i.e., after the "honeymoon" phase of college adjustment but before a likely attrition point at end of semester). Participants completed a series of instruments bound in a single booklet (Appendix A). The first page of the booklet was an informed consent document. Instruments included in the booklet included the Student Adaptation to College Questionnaire (SACQ; Baker & Siryk, 1989), the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988), Scale of Perceived Social Self-Efficacy (PSSE; Smith & Betz, 2000), the Attitudes Toward Seeking Professional Psychological Help Scale- Short version (ATSPPH-S; Fisher & Farina, 1995), Mental Health Continuum-Short Format (MHC-SF; Keyes, 2009), and a Barriers to Social Investment at



College Questionnaire designed by the author. The full booklet took students approximately twenty minutes to complete.

### *Data Analysis*

*Statistical analyses, hypotheses, and research questions.* Specifically, the following research questions and hypotheses were analyzed (all analyses were carried out through use of the statistical package called SPSS, unless otherwise specified):

RQ1: “Do objective and subjective definitions of rurality tend to match?”

RH1: “Objective and subjective definitions will be significantly correlated.” This hypothesis is examined through use of Pearson’s correlations.

RQ2: “Does rurality have a relationship with or affect college adjustment in first-year college students?”

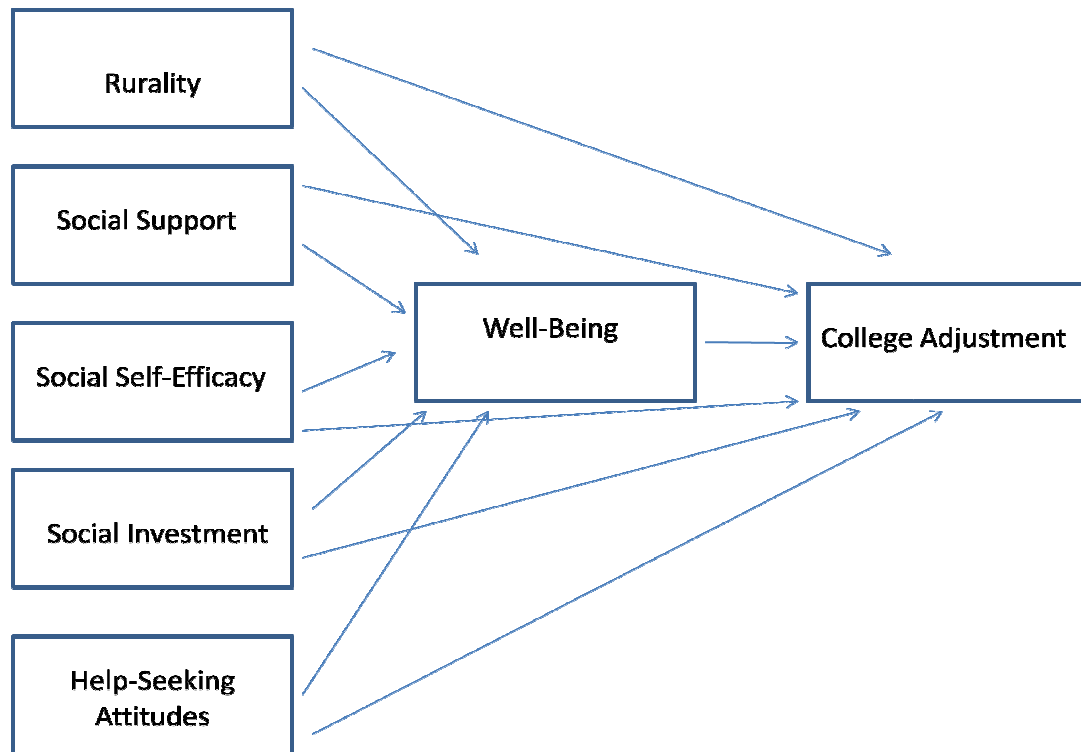
RH2: “Rurality will significantly correlate with the various constructs of interest (i.e., social support, social self-efficacy, social investment, help-seeking attitudes, well-being, and college adjustment).” This hypothesis is examined through use of Pearson’s correlations.

RH3: “There will be a significant mean difference between rural and urban students on each construct of interest.” This hypothesis is examined by dichotomizing the continuous rurality construct and using t-tests for analysis.

RH4: “All constructs of interest, when considered together, will create a predictive model of college adjustment.” This hypothesis is addressed by

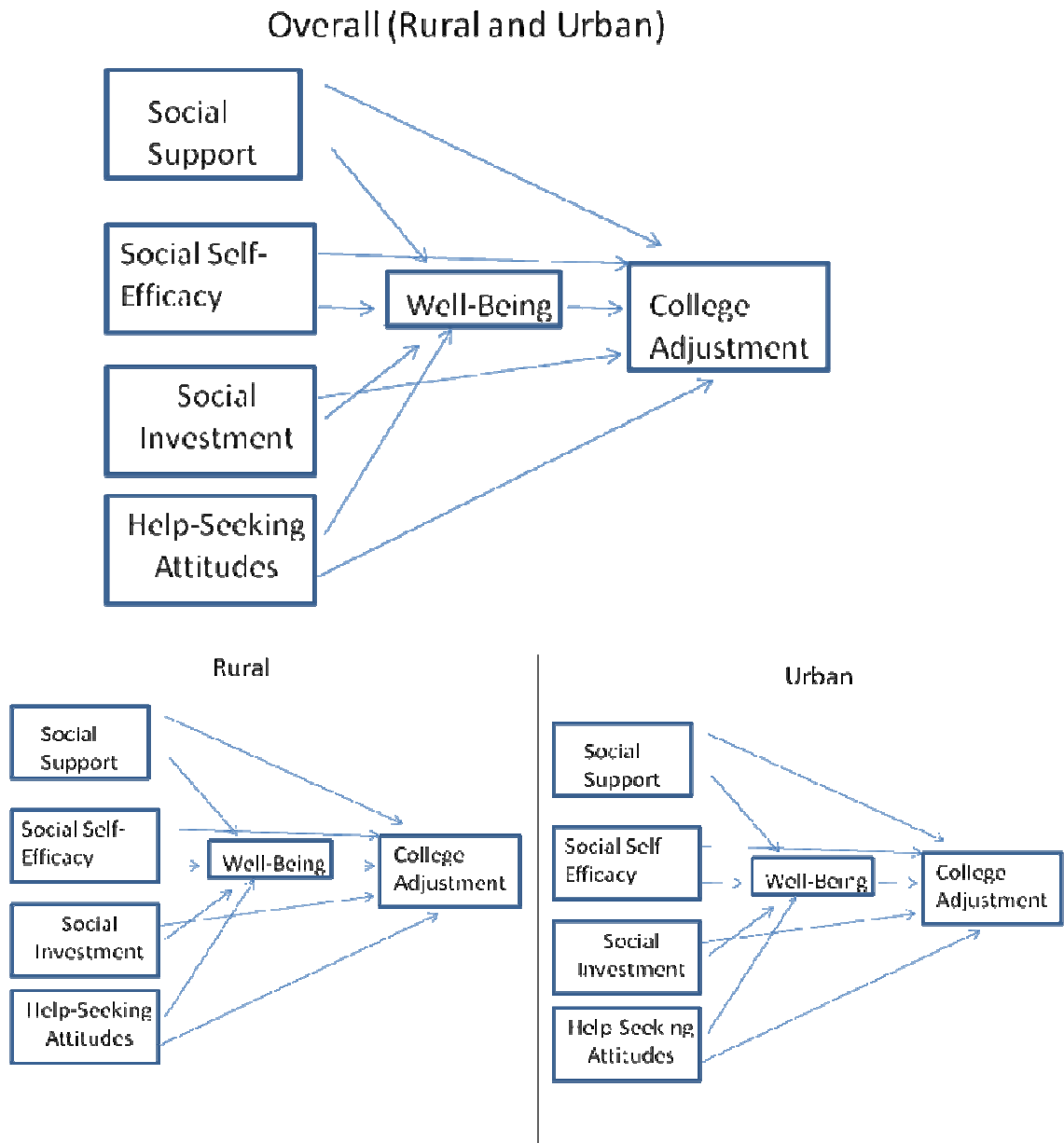
considering rurality to be a continuous variable and using multiple regression for analysis.

RH5: “There is a model of college adjustment such that”:



This model is analyzed utilizing structural equation modeling procedures (e.g., Muthén & Muthén, 2007). SEM is appropriate for this analysis due to the interest in causal relationships between latent variables (Thompson, 2000).

RH6: “Structural equation models of college adjustment will vary (in terms of fit or in terms of strength of relationship between the constructs) between rural and urban students.” This hypothesis is analyzed by again dichotomizing the continuous rurality variable. “Rurality” is removed from the predictive model and three separate models will be examined and compared: one for the whole sample, one for urban, and one for rural students:



The MPLUS software package was used to analyze the structural equation models. This model was created based on available literature on each variable and this author's predictions about how the variables may relate.

#### *Structural equation models: Explanation and rationale*

The models created for this study were constructed based on the author's framework for understanding this project and prior research on the concepts chosen for

exploration. As is discussed above, each construct included in this study was chosen based on its potential to be shaped on a personal or interpersonal level. Malleable constructs were of interest primarily because the author approached the project with a preventative and person-environment framework. In line with this framework, the predictors were situated within the models in ways that made sense based on prior research on each construct, took into account predictor relationships with other constructs and their relationships with the outcome variable (i.e., college adjustment), and considered its potential to inform future preventative efforts.

Social support is widely supported as a contributor to college adjustment (e.g., Kenny & Stryker, 1996; Phinney & Haas, 2003), yet its *unique* contributions (i.e., when considered in combination with other social variables, as in a structural equation model) has not been considered. This author was curious as to whether or not social support *per se* will significantly and uniquely contribute to college adjustment, or if social support may perhaps serve as a proxy for some more specific social variables (i.e., social self-efficacy or social investment). Further, examining potential differences between rural and urban students in terms of the strength of the contribution of social support to well-being and college adjustment was also of interest.

Social self-efficacy has received only a small amount of research attention in its role as a possible positive contributor to college adjustment (e.g., Ferrari and Parker, 1992; Patterson and O'Brien, 1997), and has never been studied in relation to rurality. Based on the findings that rural students are sometimes isolated from other peers (Esterman & Hedlund, 1994), have smaller, more cohesive peer groups and may perceive interpersonal problems as especially stressful (Laursen & Collins, 1994), and come from

families that tend to emphasize other types of development above social development (Coleman et al., 1989), exploring the extent to which social self-efficacy uniquely and differentially contributes to equations of college adjustment is crucial.

Social investment is considered in tandem with this particular set of variables for two main reasons: 1) to examine its unique contributions to college adjustment, if any, and 2) to examine whether or not its relationship strength differs between rural and urban populations (holding all other variables constant). Based on findings of scholars who have studied characteristics of rural youth (e.g., Haller & Virkler, 1993; Laursen & Collins, 1994) it seems likely that rural students may have a more difficult time (or perhaps, a different process altogether) of divesting from their pasts and investing in a new life at college. Studying the urban and rural equation models will aid in understanding whether or not this supposition may be true.

Help-seeking is being included in the equations for various reasons. Much research to date on help-seeking has focused on what predicts it, rather than what it may predict. An equation that includes help-seeking provides information on whether or not help-seeking is a significant and unique predictor of well-being and college adjustment (in combination with these particular variables). Further, it is suggested in the subsequent review of the literature that college students from rural areas may have less positive help-seeking attitudes, perhaps due to lack of exposure to mental health professionals in rural areas, (Health Resources and Services Administration, 1992) increased help-seeking stigma in rural areas (Gamm, 2004), and differential understandings of what a mental health problem entails between rural and urban youth (Chimonides & Frank, 1998). Examining whether the strength of relationship between help-seeking, well-being, and

college adjustment (in combination with the other variables) is similar or different for urban and rural youth could potentially be a very important element of this study in terms of its future applications.

Well-being was included as a potential mediator between the other constructs of interest and college adjustment. Baron and Kenny (1986) stated that a mediator variable “accounts for the relation between the predictor and the criterion” (p. 1176). Holmbeck (1997) noted that SEM strategies are particularly appropriate in applications like the proposed study in which there are multiple indicators (i.e., questionnaire items) for the variables. Aspects of well-being, such as self-esteem (Bettencourt, et al. 1999), optimism (Montgomery, Haemmerlie, & Ray, 2003), and personality variables (i.e., The Big Five; Wintre & Sugar, 2000) have been found to be directly or indirectly related to college adjustment. Yet one’s overall well-being, a resilience variable, has not been studied as frequently or in as much depth as risk variables (e.g., mental disturbance, stress, alcohol use, etc), especially in relation to college adjustment. Further, whether or not well-being might mediate the relationship between social aspects of a student and their resultant college adjustment has not yet been studied. As social well-being is a facet of overall well-being (Robitschek & Keyes, 2009) the constructs social support, social self-efficacy, and social investment were conceptualized and placed in the model as potential predictors of well-being. As psychological help-seeking attitudes have been shown to be predictive of help-seeking behaviors (Vogel & Wester, 2003), and the author was interested in examining for potentially causal relationships between help-seeking, well-being, and college adjustment, help-seeking attitudes was also positioned as a predictor of well-being. Thus this author proposed that a student’s level of well-being would at least partly

mediate (i.e., account for) the relationship between four independent variables (social support, social self-efficacy, social investment, and help-seeking) and the dependent variable (college adjustment).

Finally, the rural versus urban comparison SEM question was explored due to the potential moderating affect of rurality on college adjustment. According to Baron and Kenny (1986), a moderating variable “affects the direction and/or strength of a relation between an independent or predictor variable and a dependent or criterion variable” (p. 1173). The author proposed that relationships between the various constructs of interest and college adjustment may be different dependent on rural versus urban locale.

## Chapter 4: Results

This chapter describes the statistical analyses utilized to explore the research questions and hypotheses offered in the previous chapters, as well as the results of those analyses. First, the data checking and cleaning procedures are described. Descriptive analyses, as well as reliability and characteristics of the data, are then discussed. Results of research questions and hypotheses are given sequentially, moving from least complex to most sophisticated analyses. Results of post-hoc analyses are also discussed.

### *Data checking and cleaning*

Data was initially inspected visually for obvious outliers and anomalies. The researcher sorted each item from highest to lowest number in order to aid her ability to catch data that did not seem to fit with the rest of the data. Histograms of each construct were also inspected to visually check for and correct improbable scores.

Missing data was then inspected. Investigation revealed no significant patterns of missing data by construct, gender, time of data collection, etc., except in that students tended to omit items or mark more than one response on the SACQ, which was the final and most lengthy of the questionnaires used in data collection. The researcher hypothesizes that these more frequent omissions at the end of the questionnaire were due to test-taker fatigue and impatience on the part of the participants, and also due to the fact the font on this questionnaire was quite small, and as a result, questionnaire items visually “blended together” more than in the researcher-created section of the questionnaire. Beyond this pattern, no other significant patterns of omission were noted, and missing data were scattered randomly throughout cases and variables. In all, 149 of



the 40,560 (.004%) raw data cells were “missing” data. An imputation process was used to fill in the missing data; the participant’s average mean score on the remainder of construct was used in missing cells. (An exception to this was on the SACQ, where missing data was filled in using the average of the subscale score in which the data was missing, per the instructions for missing data given in the SACQ administration manual.) One participant’s responses were omitted from analysis completely due to omitting the entire last half of the SACQ items.

At this point, the normality of each variable was examined. No variable had a skewness or kurtosis value over 1 except for the hometown population variable (one piece of the rurality variable, which is an aggregate of two variables). Further exploration (i.e., examining histograms of the data) revealed the possibility of outliers skewing the data. Using SPSS software, the researcher used Tukey’s hinges to identify the highest and lowest acceptable value for the population variable. This process revealed that three outliers were beyond the upper bound of acceptability. These outliers were removed using the process of “Winzoring” the outliers. Instead of trimming the data, the researcher substituted the highest acceptable value for the three outlying values. This process has the advantage of eliminating outliers and reducing skew without losing datapoints. No outliers or significant skew remained after the Winzoring process. No other variables had significant upper or lower outliers.

### *Reliability*

Estimates of reliability were examined for each of the variables of interest. The Alpha coefficients were as follows: Student Adaptation to College Questionnaire (SACQ) .94, Multidimensional Scale of Perceived Social Support (MSPSS) .90, Scale of

Perceived Social Self-Efficacy (PSSE) .96, Barriers to Social Adjustment at College Questionnaire (BSIC), .58, Attitudes Towards Seeking Professional Psychological Help Scale-Short Form (ASTPPH-S) .81, and Mental Health Continuum (MHC) .92. As the reliability scores illustrate, the only scale that lacked internal consistency was the scale that the author created to measure barriers to social adjustment at college. The rest of the measures demonstrated good to superior internal consistency.

*Descriptive statistics and preliminary bivariate analyses*

Means and standard deviations for the constructs of interest are displayed in Table 1. Additionally, the researcher ran a series of correlations to assess for collinearity of the independent variables (with the exception of rurality, which is explored in a separate research question below), and to explore each variable's bivariate relationship with the independent variable (see Table 2). Well-being was significantly and positively correlated with social support and perceived social self-efficacy, which suggests that those students reporting higher levels of social self-efficacy and social support, as well as *more* social barriers, tended also to report higher well-being scores. Social support was significantly and positively related to perceived social self-efficacy and social barriers, suggesting that participants perceiving higher levels of social support also reported greater efficacy in their social skills and *more* barriers to social adjustment at college.

Per the relationships between the dependent variables and college adjustment (see Table 2), perceived social self-efficacy, well-being, and social support were each strongly and positively correlated with full scale adjustment, as well as each of the four adjustment subscales. These results suggest that higher levels of social self-efficacy, well-being, and social support tend to be associated with higher levels of college

adjustment. Social investment barriers at college showed a significant negative relationship ( $r = -.188$ ,  $p = .004$ ) with social adjustment, suggesting that those students with more barriers to social investment at college tended to report lower levels of social adjustment. Finally, social investment barriers at college was also significantly negatively related to institutional adjustment ( $r = -.185$ ,  $p = .004$ ), suggesting that those students with more barriers to social investment tended to report lower levels of institutional adjustment, or feelings/perceptions of attachment, to college.

#### *Analyses of Research Questions and Hypotheses*

##### **RH1: “Objective and subjective definitions will be significantly correlated.”**

To test this hypothesis, a series of Pearson’s correlations was utilized. Variables of interest included the objective “rurality” variable (an aggregate variable consisting of USDA rural-urban continuum codes and hometown population), participants’ self-rating as either “rural” or “urban,” and participants’ self-rating of how rural they consider themselves to be as rated on a scale of 1-100 (i.e., 1= very rural, 100=very urban). The USDA continuum codes were reverse keyed (1 to 9, 2 to 8, etc.) so that higher codes correspond with more urban areas. For the yes/no rurality definition, 1= rural, 0=not rural.

Correlations across all of the measures of rurality were highly significant (see Table 3). The linear relationship between the objective measure and self-rating on 1-100 scale was strong ( $r = .605$ ,  $p < .001$ ) and illustrates that participants from more objectively rural areas tended to rate themselves as more rural, and participants from more objectively urban areas tended to rate themselves as more urban. The linear relationship between the objective measure of rurality and binary rural self-definition (i.e., yes or no)

was also strong ( $r = .667, p < .001$ ), suggesting that those who reported they were rural tended to have lower scores on the objective measure (which correspond with more rural areas). Additionally, the linear relationship between the two subjective measures was strong ( $r = .665, p < .001$ ), suggesting that those who reported they were rural tended to rate themselves lower on 1-100 scale (corresponding with a more rural rating). These results suggest that participants' self-definitions and perceptions of their levels of rurality correspond with objective measures of rurality as defined by the United States government. That being said, even these significant correlations explain only about .49 of the variance, leaving .51 unaccounted for. This suggests that some error variance in the self-identification of one's rurality remains.

Because all of the definitions of rurality tend to be highly correlated (e.g., all would be fairly similar), only the aggregate objective rural definition will be used in analysis for the remainder of the analysis and result reporting.

**RH2: "Rurality will significantly correlate with the various constructs of interest (i.e., social support, social self-efficacy, social investment, help-seeking attitudes, well-being, and college adjustment)."**

Pearson's correlations were again used for hypothesis testing. (See Table 4). The relationship between continuous rurality and Mental Health Continuum (well-being) was significant and negative ( $r = -.129, p = .047$ ). This means that participants who reported being from more urban locations also reported mental health scores that tended to be lower. Thus those from more rural areas tended to have higher mental health scores. As this correlation was significant, correlations between rurality and each subscale of the MHC (e.g., social, psychological, and emotional) were also examined. The correlations

between rurality and the MHC social subscale was significant and negative ( $R = -.148$ ,  $p = .02$ ), suggesting that participants in more rural areas tended to report higher levels of social well-being. That is, they were more likely to highly endorse items such as “(last week I felt that) I belonged to a community, people are basically good, society is becoming a better place for people like you.” The relationship between rurality and the MHC emotional subscale was also significant and negative ( $R = -.140$ ,  $p = .03$ ), suggesting that those from rural areas tended to report higher levels of emotional well-being. Rural participants were more likely to highly endorse items such as “(last week I felt) happy, interested, satisfied.” No significant linear relationship between rurality and psychological wellbeing was observed.

Additionally, this researcher found a significant and positive relationship between rurality and help-seeking attitudes ( $r = .221$ ,  $p = .001$ ), suggesting that participants from more urban areas tended to report more positive help-seeking attitudes, and conversely, that participants from more rural areas tended to report more negative attitudes toward seeking professional psychological help.

The linear relationships between rurality and social support, social investment barriers at college, and perceived social self-efficacy were not significant.

**RH3: “There will be a significant mean difference between rural and urban students on each construct of interest.”**

To test this hypothesis, the “rurality” variable was dichotomized into two variables: one for “rural” and one for “urban.” The cut-off point dividing the variables was borrowed from the USDA, whose 2003 Rural-Urban Continuum codes are divided as such: 1-3= “metro” counties, and 4-9= “rural” counties. Because the codes for this project

were reversed to match the direction of hometown population (i.e., smaller codes correlate with hometowns of smaller populations), and because this project's rurality variable is an aggregate of USDA rural-urban code and standardized hometown population, designations for this project were: 7-9= "urban," 1-6.9= "rural."

A series of independent t-tests revealed a significant mean difference between rural and non-rural participants on only one construct of interest: help-seeking attitudes (see Table 5). Rural students reported significantly more negative help-seeking attitudes than did non-rural students,  $t = -3.739$ ,  $p < .001$ . This result lends support to the correlational help-seeking attitudes relationship described above.

**RH4: "All constructs of interest, when considered together, will create a predictive model of college adjustment."**

Correlation and multiple regression analyses were conducted to examine the relationship between college adjustment to college and the constructs of interest. Table 6 summarizes the analysis results. As discussed above, perceived social self-efficacy, well-being, and social support were all significantly and positively correlated with the criterion variable, college adjustment. Rurality and barriers to social investment at college were not significantly correlated with the criterion variable.

The multiple regression model with all six predictors produced  $R^2 = .377$ ,  $F(6, 228) = 22.98$ ,  $p < .001$ . As can be seen in Table 6, well-being had a positive significant regression weight (as would be expected from its significant and positive correlation with the criterion), and barriers to social investment at college had a negative significant regression weight in the regression model, despite having no significant simple correlation with the criterion variable. Help seeking attitudes, perceived social self-

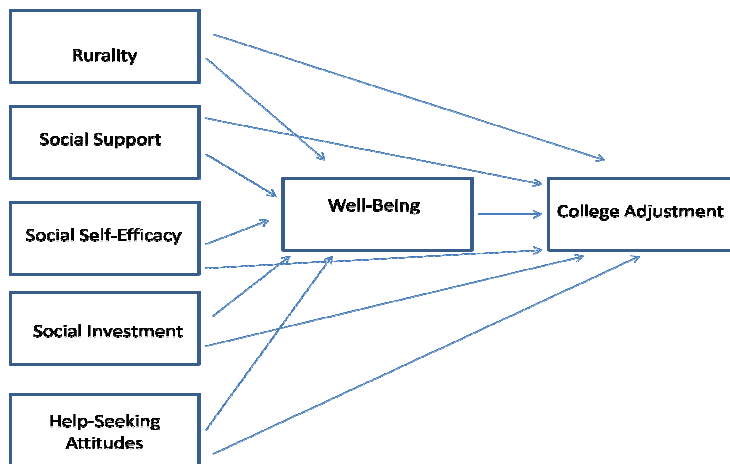
efficacy, social support, and rurality did not significantly contribute to the regression model, though social support was nearly a significant contributor ( $p=.054$ ), as was perceived social self-efficacy ( $p=.06$ ).

Because the model was found to significantly predict college adjustment (approximately 38% of the variance in college adjustment was explained by the model), this author ran a follow-up analysis to gauge whether the models of college adjustment were different for urban and rural students. To achieve this, the continuous rurality variable was split into two groups. The split was made at 7 (i.e., 7 and higher= urban [coded as 1], 6.99 and lower= rural [coded as 0]), based on the fact that the USDA makes its metropolitan/nonmetropolitan split at 7.

For rural participants ( $n= 123$ ), the model produced  $R^2 = .403$ ,  $F(5, 117) = 15.80$ ,  $p < .001$ . As was the case in the overall model, well-being was a significant positive contributor, barriers to social adjustment was a significant negative contributor, and perceived social self-efficacy and help-seeking attitudes did not contribute. However, in the rural student model, social support was also a significant positive contributor (see Table 7). For urban students ( $n= 112$ ), the model had an  $R^2$  of .367,  $F(5, 106) = 12.30$ ,  $p < .001$ . In this model, the only significant contributor was well-being (see Table 8).

Comparison of the fit of the model between rural and urban participants revealed that there was no significant difference between the respective  $R^2$  values,  $Z = .368$ ,  $p = .71$ .

**RH5: There is a model of college adjustment such that:**



This hypothesis was explored using path analysis procedures, which are a subset of structural equation modeling procedures. The path model was tested using Mplus Version 5 (Muthen & Muthen, 2007). Hu and Bentler (1999) have suggested that the standards by which to judge model fit in SEM models with large numbers of participants should include Steiger’s root-mean-square error of approximation (RMSEA, values below .05 suggest a very good fit, values <.10 indicate suggest an acceptable fit) and the comparative fit index (CFI should be greater than .9).

The initial model proposed above was found to be a “saturated” model, meaning that the number of free parameters exactly equals the number of known values; thus, the model automatically has zero degrees of freedom and is a “perfect” fit. However, this “perfect” fit is meaningless statistically, as variance cannot be estimated. In other words, a saturated model is not able to make predictions any more parsimoniously than the raw data itself.



To test the fit of the model in a meaningful way, at least one path had to be removed. Based on the sparse research in the area of help-seeking and its relationship to well-being, and also on its insignificant relationship in the preliminary analysis, it was decided that the help-seeking attitudes to well-being path be trimmed. The resulting model demonstrated a good fit,  $RMSEA < .001$ ,  $CFI = 1$ . In this initial model, social support and social self-efficacy were significant predictors of well-being, and barriers to social adjustment, social support, and well-being were significant predictors of college adjustment (see Figure 1).

Consistent with the Model Building Process suggested by Raykov and Marcoulides (2001), the researcher then began the process of testing modified models until the “best” possible model (i.e., most parsimonious while also remaining a good fit for the data) was obtained. From the original model, the researcher used an iterative process of trimming non-significant paths. Model fit statistics of each iteration were obtained. The first path to be trimmed was help-seeking attitudes to college adjustment. The pattern of significance in the included paths remained the same. This resulting model was again saturated; thus another path had to be trimmed. Social investment to wellbeing was trimmed based on the fact that it was not significant. This model maintained a good fit ( $RMSEA = .04$ ,  $CFI = .998$ ). The pattern of predicting and non-predicting variables was again the same as it was in the original model (see Figure 2, iteration 4).

The rurality to well-being path was the next path to be trimmed. The fit continued to be significant ( $RMSEA = .03$ ,  $CFI = .998$ ), and the pattern of predicting variables remained the same. The final path to be trimmed was the rurality to full adjustment path, which resulted in a good-fitting model ( $RMSEA = .04$ ,  $CFI = .998$ ). In this final, most

parsimonious model, social support and social self-efficacy continued to significantly predict well-being, but only well-being and barriers to social adjustment remained as significant predictors of college adjustment (See Figure 3).

**RH6: “Structural equation models of college adjustment will vary (in terms of fit or in terms of strength of relationship between the constructs) between rural and urban students.”**

To test this research hypothesis, the rurality construct was again dichotomized (for complete description of how this was done, see explanation under RQ3). The “best” (i.e., most parsimonious) model obtained from the Model Building Process described above was then tested twice—once using only the population of rural students, and again with urban students.

The rural and urban models turned out to look somewhat different. The model fit well across groups, RMSEA= .04, CFI= .995. For the rural group, the pattern of significant predictors exactly mimicked what was found in the model iterations 1-5 tested above, with social support and social self-efficacy predicting well-being, and barriers to social adjustment, social support, and well-being predicting college adjustment (see Figure 4). However, with the urban group, the pattern of predictors was different. In the urban model, social support and social self-efficacy predicted well-being, yet the sole direct predictor of college adjustment was well-being. In other words, the effects of social support and social self-efficacy are likely to be fully mediated by well-being in the urban sample.

### *Post-Hoc Analyses*

Based on the results of the structural equation models tested above, the researcher decided to test for mediation effects in the full, untrimmed (yet unsaturated) model. Mediation was tested using the bootstrapping method (Efron, 2000; Mackinnon & Lockwood, 2003). Basically, a smaller subset of the whole sample used for this analysis is selected and analyzed, and this process is repeated a large number of times (using statistical analysis software such as MPLUS). Some subsets of each bootstrap sample will overlap (i.e., the same participants may be used in more than one sample), but a modified sample of participants is used in each bootstrap. The correlation is calculated in each bootstrap sample, then the distribution of the bootstrap correlation coefficients is calculated. Preacher and Hayes (2004) assert that this approach may be superior to Baron and Kenny's (1986) approach for testing for mediation effects, based in part on the fact that in bootstrap analyses, the normality assumptions do not have to be met and small sample sizes can be used.

Results for the bootstrapped full model suggested that well-being was a significant mediator of the relationship between social support and adjustment, and between social self-efficacy and adjustment (see Table 9).

The researcher also elected to run a follow-up analysis to check for mediation in the multigroup SEM (see Table 10). For the rural group, well-being was a specific mediator between social self-efficacy and adjustment. Additionally, well-being served as a mediator between social support and adjustment, yet in the rural model, social support also had a significant direct relationship with adjustment. For the urban group, well-being worked similarly in that it mediated the relationship between social support and

adjustment and social self-efficacy and adjustment; however, in the urban group, social support had no direct relationship with adjustment. So, the bootstrap analysis unearthed one difference between the rural and urban models: social support potentially has a direct impact on adjustment in rural students, but not in urban students.

## Chapter Five: Discussion

This chapter will discuss the potential implications of the results presented in the previous chapter. Findings of the research hypotheses and questions will be discussed, including possible interpretations of the statistics per sé, potential explanations for the findings, and convergence with and/or divergence from literature reviewed in Chapter Two. Implications of these results (i.e., theoretical, research, and practice) will be considered. Finally, limitations of the current study will be examined, and recommendations for future research within the realms of rural research and college adjustment research will be given.

### *Rurality: Does it matter?*

The main research hypotheses offered in this study revolved around the exploration of rural and urban differences and the contribution of rurality to first-year college students' adjustment to college. As both the bivariate (i.e., Pearson's correlations, t-tests) and multivariate (i.e., regression and SEM) analyses indicated, rurality per sé does not seem to have an effect on the self-reported adjustment scores. As the t-tests demonstrated, rural and urban participants were statistically equal in terms of the full adjustment scores, and in fact, across all of the adjustment subscales as well (i.e., academic, social, personal-emotional, and institutional adjustment).

Even though urban and rural students did not demonstrate a significant difference in college adjustment, might there still be some differences between these groups that would be useful to know? Using t-test analyses, rural and urban students only reported differences on one construct, with urban students reporting significantly more positive help-seeking attitudes to college. In terms of other bivariate comparisons between rurality and constructs of interest, this sample displayed a significant negative relationship (via

Pearson's correlation) between well-being and rurality, meaning that those participants from more urban areas tended to report lower well-being scores. Breaking well-being into its component parts for analysis demonstrated that in particular, rural participants tended to report higher levels of social well-being and of emotional well-being, but not of psychological well-being (no significant relationship found). These results suggest that overall, rural individuals tend to have more optimistic views of the human condition, as well as feeling happier, more interested, and more satisfied. Whereas there was a significant Pearson's correlation between well-being and rurality ( $r = -.148$ ,  $p = .02$ ), the  $t$ -test for well-being between rural and urban participants was not significant ( $p = .10$ ), perhaps due to the somewhat indiscriminate cut-off point used for the dichotomous rurality analyses.

Multivariate analyses were an important next consideration in understanding the role of rurality in college adjustment. Research hypothesis four stated that the constructs of interest (social support, social self-efficacy, social investment at college, psychological help-seeking, well-being, and rurality) when considered in conjunction with one another, would create a predictive regression model of college adjustment. In this instance the null hypothesis was rejected in favor of the research hypothesis presented, as these variables did combine to significantly predict college adjustment. In the overall model, which was estimated to account for approximately 38% of the variance in college adjustment, the only significant unique contributions came from well-being and barriers to social investment. Well-being contributed in the strength and direction (positive) that was expected (i.e., well-being showed a positive and significant correlation with college adjustment in previous analyses). However, barriers to social investment uniquely and

significantly contributed to the regression formula, even though it had no significant correlation with college adjustment. Thus, barriers to social investment in this instance became what is known as a *suppressor variable*, or a variable that contributes uniquely to multivariate analysis but is not correlated with the criterion. One potential statistical explanation for why this suppression occurred is the following: Barriers to social investment is correlated with social support and well-being, which means that when all of these factors are considered together, the formula could be picking up on only the variance in barriers to social investment that *is not* shared with the other two variables. In other words, could it be that the “barriers” covered in this instrument also serve the function of providing students with a sense of social support (and by default, well-being)? This finding highlights the idea that perhaps the author has been attempting to bifurcate two constructs that are not truly two ends of the same continuum; that is, perhaps “barriers” (i.e., obligations outside of college) and social investment at college are not mutually exclusive. Perhaps a student *can* simultaneously remain invested in life outside of college while also investing in a life within it. Further, it could be that students who are used to maintaining obligations outside of college more easily also involve themselves in college life, perhaps because they learn more about responsibility and value the human connections that the obligations come with. It would appear that, based on these results, the barriers to social investment scale may be tapping into two separate constructs: actual “barriers” and positive contributors to social investment. (It may even be that each singular obligation assessed, such as having a job outside of the university, serves both of these functions.) Further research on the concept of social investment and its barriers is warranted.

Beyond the unexpected contribution of barriers to social investment in the overall adjustment regression (i.e., it contributed to the regression analysis despite having no simple correlation with college adjustment), the expected contributors of social self-efficacy and social support did not contribute significantly. This likely happened because of collinearity with each other, and collinearity with other variables (such as the barriers measure, as discussed above).

Contrary to what was hypothesized (RH1), rurality did not contribute to the overall regression model. Due to this finding, the researcher elected to explore the rurality contribution in another way; she removed rurality from the regression formula and instead used it as a grouping variable (author's note: this post-hoc analysis was similar to RH6, which deals with comparing structural equation models for rural and urban students). This way, the researcher was able to explore whether or not the regression formulas for rural and urban participants were structurally different. Additionally, if the models were found to be significantly different in their fit or structure, it would lend evidence to the effect of rurality as a moderator between the dependent and independent variables.

Both the rural and urban models of college adjustment were found to be a good fit for the data. The rural regression model predicted approximately 40% of the variance in college adjustment, while the urban regression formula predicted approximately 37%. Comparison of the fit of the model between rural and urban participants revealed that there was no significant statistical difference between the respective  $R^2$  values, meaning that both formulas predicted college adjustment for their respective groups about equally well. This means that in this sample, rurality was likely not a strong moderator between



the constructs of interest and college adjustment. Be that as it may, a visual inspection of the predictors, their beta weights, and their significance between the rural and urban groups (see Tables 7 and 8) demonstrate that the structure of these two formulas differ in subtle yet potentially informative ways.

In the rural regression model, well-being, social-support, and barriers to social adjustment contributed significantly and in the expected direction (based on the preliminary simple correlations). Social self-efficacy was not significantly contributing, even though it correlated with SACQ (for rural students). Social self-efficacy did not contribute to the regression model, likely because of collinearity with other variables (such as social support,  $r = .338$ ,  $p < .001$  and well-being,  $r = .588$ ,  $p < .001$ ). In other words, it is likely that in the case of rural students, social self-efficacy shared some of the responsibility for SACQ variance with social support and well-being.

In the urban regression model, the only significant contributor was well-being, despite the additional significant correlations between the SACQ and social support and social self-efficacy for urban students. Again, it is likely that social support and social self-efficacy did not contribute to the model because of collinearity with well-being ( $r = .528$  and  $r = .427$ , respectively, both  $p < .001$ ). In other words, social support, social self-efficacy, and well-being seemed to overlap and tap into a similar overarching construct, which diminished their respective unique contributions to the model, for urban students.

Thus, this author can statistically account for why the bivariate and multivariate relationships looked different within rural populations, and within urban populations. Significance testing demonstrated that the urban and rural regression models were not statistically significantly different, in terms of how well they predicted or in terms of their

overall structure. Yet a cursory glance at the significant versus non-significant contributors in each model suggests that there *is* something different in terms of differences in unique contributors to overall adjustment (see Table 9 for summary). This author believes that these results may illustrate some of the potential differences in what aids to, and detracts from, college adjustment for rural and urban students. For example, in the case of urban students, only one predictor remained significant when considered with a host of other variables: well-being. Based on this data, well-being becomes the “make it or break it” variable for predicting college adjustment in urban students when considered in conjunction with the other constructs of interest. (Importantly, as discussed above, social support and social self-efficacy probably do have an effect on the college adjustment of urban students. In combination with these specific variables, however, well-being appears to encompass their contributions.)

Conversely, in the case of a rural student, other constructs were also significant predictors: well-being is again salient, yet social support and barriers to social adjustment contributed significantly and uniquely to the model as well. How is it that for rural students, social support and barriers to social adjustment contributed unique variance, whereas this was not the case in urban students? It may be that the effect of social support and barriers to social adjustment varies based on the group of student being considered. This implication is explored in more depth in latter sections of this discussion.

The structural equation models of this data help provide a deeper understanding of what the regression models demonstrated. Both the full model and the multigroup comparison (rural vs. urban model) confirmed what the less sophisticated analyses appeared to be illustrating: rurality in and of itself did not moderate the level of

participants' adjustment to college. In fact, rurality made no significant contribution even through the path of well-being (in Model 1). Yet when models were considered in a multigroup analysis (rural versus urban participants), a few noteworthy differences emerged. For example, in the between-groups comparison of the most parsimonious model, social support is both an indirect (through the path of well-being) and direct predictor of college adjustment for rural students. In the urban model, social support only contributed through the path of well-being and had no direct effect on adjustment. This echoes and expands upon what was found in the rural regression model: social support appears to somehow work differentially for the urban and rural student. Whereas social support *does* still contribute to the adjustment of urban students, its effect appears to be fully mediated by well-being. For rural students, social support may independently predict both well-being and adjustment. In other words, it appears that for rural students some of the effects of social support are linked to better adjustment, regardless of well-being, whereas in urban students, well-being encompasses the effect of social support on adjustment.

This author speculates that in the case of rural students, the independent contribution of social support to adjustment may have something to do with the collectivist culture and social structure of rural communities. As discussed in the introduction, people living in rural communities tend to have strong community kinship networks (Halfacree, 1995), as well as having limited social outlets, such as those afforded through one's family, church, and school events (Slama, 2004). Taken together, a rural student may come to college used to a small, close-knit community that joins around a small number of common activities and, by default, the small number of people

that are part of those activities. When one of those people leaves the community to embark on a new opportunity, as would be the case when the high school student transitions to college, it is possible that he or she maintains that concentrated sense of the community kinship behind him or her. Perhaps this is that “extra something” (i.e., unique variance) that social support contributes for rural students’ adjustment. Urban students, though they may also be involved in smaller communities within their larger community, may experience social support from their home in more diffuse ways, due to the variety of social networks and outlets available to them. Thus social support is still important for the urban student, but it *looks* different and contributes differentially to adjustment. It could be that the direct effect of social support found in rural students provides a buffer against the potential culture shock effect of transitioning into a much larger community.

Additionally, the multigroup SEM comparisons demonstrated that barriers to social adjustment are likely to be more impactful for the rural student, as the barriers to social investment had a direct negative effect for rural students that was not observed in urban students. Yet as was explored in an earlier section of this discussion, higher social investment barriers scores were correlated with *more* social support and *higher* well-being scores. It could be that urban students are still living close enough to home (80% of the urban sample was from the Lincoln/Omaha area) that their obligations provided more benefit (social support, well-being) than loss, so their social investment barriers score did not predict adjustment. For the rural student, obligations outside of college may have been more difficult to maintain, which is perhaps why social barriers ended up having a negative adjustment effect for this population. This idea is explored in more detail in the Convergence/Divergence section, below.

Inspection of the rural versus urban SEM models revealed differences on another construct: well-being. For both urban and rural students, social support and perceived social self-efficacy predicted well-being, and well-being predicted college adjustment. Indeed, the bootstrap analysis of the full model demonstrated that well-being appeared to operate as a mediator between perceived social self-efficacy and adjustment, and between social support and adjustment. Though well-being significantly predicted college adjustment in both models, inspection of standardized path weights reveals that it contributes more to the urban model (though how much more cannot truly be gauged, as the wellbeing to adjustment path is significant below  $<.001$  in both groups). It appears that this happened because the full brunt of the effect of social support was channeled through well-being in the urban model, whereas in the rural model, the effect of social support was split between direct and indirect. (As discussed earlier and again in the Divergence/Convergence section, it may be that rural and urban students may experience social support differently, and this may contribute to this effect.)

In sum, it is important to come back to the original question: Does rurality matter when it comes to college adjustment? Results of this study reflect that rurality does indeed matter, although perhaps in more subtle ways than were originally hypothesized. The analyses presented in this discussion do not demonstrate that rural students suffer lower perceived adjustment to college as a result of their rurality; in fact, no overall adjustment differences *per sé* were found between rural and urban students. Yet the *path* and the *means* to adjustment may be slightly different in rural and urban students. Per this sample, in rural students, social support was a direct predictor of adjustment, and barriers to social investment also played a role. For urban students, social support contributed to

adjustment, but only through the mediator of well-being. For all students, well-being appeared to be crucial for college adjustment, as did perceived social self-efficacy (through the mediator of well-being).

Each of the constructs of interest will be considered in further depth in the section below.

#### *Convergence/Divergence from previous literature*

*Social support.* As was expected, social support was a major contributor in predicting the college adjustment of participants in this sample, regardless of locale. This data replicated the finding that is common in many previous studies in this area (e.g., Kenny & Stryker, 1996; Phinney & Haas, 2003): social support is likely to be beneficial for college adjustment. Results of this study's analyses were also reminiscent of Lafreniere and Ledgerwood (1997), who found that social support operated on college adjustment through a mediating variable (in that study, living situation). In this study, well-being was a mediating factor between social support and college adjustment for all students. However, structural equation models demonstrated that social support may have a direct effect on adjustment for rural students, but not for urban students. Fisher (2007) found that social support can have differential effects on college adjustment based on racial/ethnic group, so perhaps the results of this study extend upon this by offering another between-groups difference in the social support/adjustment relationship.

All things considered, this study is largely convergent with previous research in the area of social support, yet offers unique contributions to the field by demonstrating that social support may work through the mediating factor of well-being and may have

slightly differential impacts for first-year students based on locale (i.e., rural versus urban).

*Social self-efficacy.* Across the board, in both bivariate and multivariate analyses, social self-efficacy was found to be a significant contributor to college adjustment in this sample. This finding replicates those of Patterson and O'Brien (1997), who found a positive relationship between social self-efficacy and college adjustment. Additionally, several studies (e.g., Connolly, 1989; McFarlane et al., 1995; Smith & Betz, 2002; Wei, Russell, & Zakalik, 2005) have previously demonstrated that social self-efficacy is negatively related to psychological maladjustment (a risk factor in college adjustment). The findings of this study extend these findings by illustrating that social self-efficacy is also related to well-being (perhaps a resilience factor in college adjustment). This finding may seem straightforward and expected based on social self-efficacy's frequent negative relationship with risk factors. However, this researcher wants to emphasize that this study's demonstration of social self-efficacy's positive relationship to well-being and adjustment is actually quite important for a more strengths-based approach to the study of college adjustment. Because it cannot and should not be assumed that resilience is merely the flipside of risk (Rutter, 1987), especially within the realm of human functioning (Eklund et al., 2011) these results demonstrate empirically that social self-efficacy is a likely contributor to well-being, which mediates the relationship with college adjustment. Thus this study offers evidence that social self-efficacy is not only a detractor from risk, but may also be a contributor to resilience among first-year college students.

*Social investment at college.* The construct of social investment at college was one conceptualized and proposed by this researcher for the purposes of this study. Thus,

no previous research had studied this construct in its relationship to college adjustment, though other researchers studied closely related concepts and found a negative relationships between off-campus obligations (Nora et al., 2006), friendsickness (Paul & Brier, 2001) and college adjustment, and a positive relationship between social capital and college adjustment (Wells, 2008). This study found in bivariate analyses that barriers to social investment had no correlation with college adjustment, and rural and urban students experienced similar levels of social barriers to investment. (Rural and urban students also reported maintaining ties with statistically equal numbers of friends from high school.) Yet barriers to social investment wound up to be a significant negative contributor to college adjustment when considered in conjunction with other constructs, especially for rural students. This appears to be in line with Nora et al. (2006), who found that the biggest barriers to college persistence (which college adjustment predicts) among minority freshmen are off-campus familial and job responsibilities. This result may also speak to the findings of Esterman & Hedlund (1994), who found that rural students tend to have cohesive peer groups and feel especially close to their families. These attributes all could make the divestment in an “old life” and investment in a “new life” at college relatively more difficult for a rural student.

However, there are other ways to look at the social investment findings. The questionnaire used for this study assesses a student’s perceived obligations to home, community, family of origin, and friends from “back home.” As approximately 80% of the students in the urban sample were from what the census bureau would consider to be the Lincoln/Omaha/Omaha metro area (mean distance from home= 38 miles; N=91), and the students are attending college at the University of Nebraska-Lincoln, it may be



comparatively easier (at least, in terms of travel times and hence, monetarily [i.e., money for fuel]) for this sample's urban students to maintain those obligations as compared to rural students, who on average live 153.4 miles away from their hometown. Additionally, this study's statistical analyses seem to suggest that students may stand to *benefit* (in terms of social support and well-being) from off-campus obligations, and this may be especially true for those students who are closer to their obligations (e.g., most urban students in this sample).

Notably, the remaining 20% [N=23] of the urban sample hailed from cities of some distance from Lincoln; the mean distance from home was 487 miles. One might initially assume that social and familial obligations to home would be increasingly difficult for a student living this far away from their home. However, the barriers to social adjustment scores of students from Lincoln/Omaha (mean=21.16) were significantly higher than that of urban students from more remote areas (mean= 18.70;  $t=2.55$ ,  $p=.01$ ). Thus it seems that students who live further from home perceive fewer obligations to home, which may actually reflect that students who live a long distance from home are likely to be unable to maintain obligations to friends, family, jobs, etc. in their hometowns, and correspondingly, they may feel more free to fully invest in their new social lives at college.

*Psychological help-seeking.* Help-seeking attitudes were not found to correlate with college adjustment in bivariate analysis or significantly contribute to multivariate analyses. In fact, this is the only construct of those chosen to patently have no relationship with college adjustment. This result is divergent from what was found by DeStefano et al. (2001), who showed that students who participated in counseling on a

voluntary basis (thus who presumably would have more positive help-seeking attitude scores) had significantly higher adjustment scores, and also that of Wilson et al. (1997), which found that students who sought and received counseling at college were significantly more likely to still be enrolled two years after counseling than those who were offered treatment but turned it down.

In spite of its lack of relationship with college adjustment, help-seeking attitudes proved to show a significant between-groups difference, in that rural participants had significantly more negative help-seeking attitudes than did their urban peers. This would appear to be a validation of previous assertions about rural individuals and psychological help-seeking, namely Gamm (2004), who asserted that rural individuals may experience a particular set of barriers to psychological help-seeking, including intense stigma, as well as Wagonfeld (2003) and Slama's (2004) discussions of rural values and attributes that may inhibit help seeking. In addition to convergence with previous research on help-seeking among rural individuals, this project offers an extension of these findings to first-year rural students in a college setting.

So, although it does appear that rural students may lack the positive help-seeking attitudes about seeking psychological services that their urban counterparts report, rural students' adjustment scores do not suffer for it. It may be that rural students also have some kind of "buffer" to their less positive help-seeking attitudes, such as a) intact, supportive familial and social support networks (Esterman & Hedlund, 1994; Laursen & Collins, 1994), b) internal sense of self-reliance (Wagonfeld, 2003), which may be adaptive rather than maladaptive or c) greater overall sense of well-being, as discussed below. Further, this finding, though it does not speak directly to adjustment, may still

inform how to make adjustment intervention methods more effective. This is discussed in more detail in a latter section of this review.

*Well-being.* Well-being as it was conceptualized in this study had not yet often been considered in its relationship to college adjustment by the academic community. The majority of previous literature has focused more on one's psychological disturbances (i.e., risk factors) and their relationships to college adjustment, rather than well-being (i.e., a resilience factor) and its role in impacting adjustment. Yet previous literature has shown that other resilience factors that may contribute to one's sense of well-being, such as self-esteem (e.g., Bettencourt et al., 1999; Friedlander et al., 2007; Mooney et al., 1991; Wintre & Sugar, 2000), self-confidence (Martin et al., 1999), self-efficacy (Phinney & Haas, 2003; Silverthorn & Gekoski, 1995), optimism (e.g., Montgomery et al., 2003), and other similar factors have positive relationships with college adjustment. The results of this study would appear to support the previous research on resilience factors in that well-being was significantly related to college adjustment in both bivariate and multivariate analyses. Structural equation modeling revealed that well-being may mediate the relationship between social support and adjustment and between social self-efficacy and adjustment, which offers another conceptual extension on research for all three of these constructs in their relationship to college adjustment. Of particular note is the finding that in the urban structural equation model of adjustment, well-being was the only direct contributor to adjustment.

*Rurality.* As there was no quantitative research on rurality and college adjustment to draw from, this study offers contributions to the fields of both rural studies and college adjustment, many of which have already been explored in previous sections of this

chapter. As was discussed above, this study does not find evidence of rurality being of any specific detriment to college adjustment among first-year students. However, rural students and urban students may be differentially affected by the same constructs; namely, the role of social support might be more predictive for rural students (as it has both direct and indirect effects on adjustment), as may be the role of social investment. For urban students, well-being might be slightly more predictive. Results did demonstrate that social and emotional well-being were significantly negatively related to rurality, which suggests that the more rural of a locale that a student hails from, the higher reported level of optimism about the human condition and about one's daily positive affect. It is difficult to guess at why this result was found, as the previous research on rural youth has focused solely on risk, rather than resilience, factors. It could be the case that rural students truly are happier and more optimistic than students from urban areas. Anecdotally, people often extol the benefits of rural living, such as strong sense of community and community pride, cleaner air and water, cheaper cost of living, lower crime rates, slower pace of life (a "simpler" way to live), and quiet relative to living in a city. Though this author struggled to find published empirical research linking rural culture or attributes of the "rural way of life" to well-being, especially within the United States, a host of Australian scholars (see, e.g., Kelly et al., 2010) appear to be moving in this direction. It could be the case that the benefits of living in a rural community do have positive effects on youth's subjective well-being, and that this youth bring these benefits with them to college. Continued research on rural or "agrarian" attributes and values and subjective well-being would aid in understanding these complex relationships.

On the other hand, it could also be that rural students are more concerned with social desirability. Per the “goldfish bowl effect” described in Slama [2004], one’s sense of being scrutinized is amplified due to *actual* possibility for scrutiny in rural communities. It is possible that first-year rural students, who have in this sample just recently transitioned to a larger community, bring this sense of small community and sense of being scrutinized with them. Lingering felt “goldfish bowl” effects could inflate a well-being score (as well as inflating/deflating other scores). It could also be the case that rural youth tend to report an inflated sense of well-being due to the sense of stoicism valued in rural communities (Rughani, Deane & Wilson, 2011).

One unique conceptual contribution of this study is its exploration of the concept of “rurality” per sé. As literature review revealed, various definitions of “rural” and “urban” (or “metro” versus “non-metro”) have abounded in literature, with little to no consistency in rural definition across studies. Consequently, one issue this researcher ran into in designing the current study was determining how “rurality” would be defined and measured. In the end an objective aggregate variable consisting of size of hometown and USDA rural-urban codes was created; yet this researcher had lingering questions about self-definitions of rurality, and whether or not one’s subjective perception as rural (or not) would line up with objective definitions. Hence the creation of research question number one, which aimed to assess statistically how well objective and subjective definitions of rurality correlate. Results of this study suggested that college-aged participants tended to self-identify themselves as “rural” or “not rural” in ways that significantly correlated with objective definitions. Additionally, participants tended to be able to accurately estimate “how rural” they are, meaning that their self-definition of how

rural they saw themselves to be on a scale from 1-100 correlated significantly with objective rural-urban definitions. These findings suggest that perhaps future rural researchers may choose to use either an objective (e.g., government-defined) definition of rural or a subjective self-rating of rural and come away with largely the same results. This could be a boon for those interested in studying rural populations, as using self-definition only could save time and money for survey researchers (e.g., those who survey people of multiple locales and want to know if the area each person comes from is rural or not. Researchers would not necessarily have to look up each person's locale after data is collected, but instead could rely on participant self-report). However, the correlation between objective and subjective rural identification data, while strong, was not perfect: .51 of the variance still unaccounted for. Replication of research on the issue of rural definition is crucial to determining best practices for defining what is and is not "rural" in research.

### *Practical implications*

As was discussed in the introduction to this project, college students become an investment for the institutions that recruited them, and it is wise for institutions of higher education to develop strategies for maintaining their recruits. Institutions want their students to persist—altruistically, for the cultivation of the individual student's potential success, well-being, and contributions to society, and on a practical note, for the sake of the investment that the institution has already made in each student. Yet most college attrition happens during the first year of college, with upwards of 33% of all freshmen students not returning for a second year (Postsecondary Education Opportunity, 2010). This being the case, finding answers to the question, "What more can be done to help

new college students?” is a question that should be of utmost importance to those who work in higher education. Though this study certainly does not have all of the answers to that question, it can perhaps offer a few.

Research has suggested that students who report better adjustment to college tend to be more likely to persist (Baker & Siryk, 1984), so part of the answer to the above question involves finding ways to bolster student adjustment to college. Notably, this study intentionally focused on likely social correlates and contributors to student adjustment that can potentially be altered (i.e., enhanced, with the exception of rurality) through targeted programmatic efforts, rather than studying demographic variables such as gender, socioeconomic status, ethnicity, age, etc., which are impossible to affect programmatically. Consequently, results of this study lend themselves particularly well to speculation about *action*—that is, it can help inform what steps might be taken to enhance first-year student adjustment to college, rather than only inform thinking about college adjustment in a solely theoretical way. That all being said, this study suggests that there are at least three channels of action through which student adjustment can be fostered: increasing perceived social support, enhancing perceptions of social self-efficacy, and fostering a sense of well-being.

*Social support.* Perceived social support was found to have a consistent strong correlation with college adjustment, and multivariate analysis (i.e., SEM) demonstrated that social support is a casual predictor of college adjustment. It may behoove those working with college freshmen, then, to work along several channels, such as: a) helping students to find people and places on campus where they feel supported, b) implementing a model of *dual socialization*, which may bolster students’ perceptions of social support,

c) working with students in being able to accept provisions of support, d) coaching parents of first-year students on how to provide support for their children, and also providing relatively simple, low-cost, built-in opportunities for them to do so.

First of all, linking students with people and places that feel nurturing or supportive to them may be an important consideration. In a sense, this step is about social support *building*, or connecting students with opportunities to garner social support and social capital. Many colleges already make this a priority for students, offering programs such as learning communities, defined by Astin (1985) as “small subgroups of students...characterized by a common sense of purpose...that can be used to build a sense of group identity, cohesiveness and uniqueness that encourages continuity and the integration of diverse curricular and co-curricular experience” (p. 161). Learning communities can be seen in various forms; for example, the University of Nebraska-Lincoln offers residential learning communities, in which students live, attend classes, and socialize with a core group of other students with similar interests (University of Nebraska-Lincoln, 2009). Many colleges also have offices and staff dedicated to the provision and maintenance of involvement opportunities for students, and students can be connected with groups they are interested in by visiting these offices—or perhaps even in visiting the website of that office. So, many colleges are already on the right track when it comes to the first piece of this puzzle.

Even though many colleges do a good job of providing potential sources of support for students and even teaching them how to utilize these resources in student orientation, many students still do not use learning communities or student groups as a way to feel supported on campus. This presumably happens for a variety of reasons, but



one of particular relevance to this project is the idea of cultural differences as a barrier to social involvement. As Tierney (2000) asserts, involvement at college is often conceptualized as the assimilation of students into the dominant culture of the institution, and furthermore, the dominant culture of many colleges is reflective of White, middle to upper-class, potentially urban-centric ideals. Is a paradigm shift in how a student can be “involved” on campus needed? That is, can a student be involved and reap the benefits of that involvement (i.e., social connections, persistence at college) without necessarily being absorbed into the dominant culture?

Rendon, Jalomo, and Nora (2000)’s cultural perspective on student-college interaction speaks highly to the intention of this study, which is to explore potential differences in rural and urban students in their first year of college. In essence, Rendon et al.’s work provides a starting point to creating programs that boost social support and feelings of belonging at college among rural students, who can be conceptualized as coming to college from a non-dominant culture. This study’s results indicated that social support was a strong contributor to the well-being and adjustment of all college students; yet, in the rural student SEM, social support was a *direct* contributor, meaning social support contributed something unique and important per sé in this population. Thus finding ways to enhance perceptions of social support in this group of students in particular may be crucial to their adjustment and subsequent persistence. Additionally, helping rural students enhance their social support may be a way to boost well-being and adjustment in a group that may otherwise be reluctant to seek psychological help.

Rendon et al.’s model challenges the assumption that a student must assimilate to the college’s culture to be successful at college. Importantly, this work incorporates the

idea of *dual socialization*, which requires the use of cultural translators and role models to provide information and guidance on the unfamiliar world/culture of the college, help mediate conflicts that arise between the students' culture and the campus culture, and model behaviors that fit with norms, values, and beliefs of both cultures. Using this model in application, a "rural student collaborative," may be ideal. The collaborative would provide peer mentoring for rural students; that is, it would match persisting upperclass students from rural areas with new students from rural areas. These upperclass students would serve as the cultural brokers that would provide information, guidance, mediate conflicts, and model behaviors that fit within both cultures. It may also be helpful for such a program to have a professional staff member on board to provide year-to-year consistency, organization, programming, and guidance for peer mentors. The University of Nebraska-Lincoln offers a variation of this that still fits within the model proposed by Rendon et al. The College of Agriculture and Natural Resources (CASNR), which tends to enroll large numbers of majors from rural areas, has developed a program called "CASNR Cares" (CASNR Cares, 2011). In this program, one professional staff member employed by the college has at least one personal contact with each incoming first-year student. The purpose of this contact is to help students acclimate to the college environment. Additionally, the staff member is available to meet or provide e-mail guidance to students or parents who have questions or concerns. In this scenario, the professional staff member is the cultural broker. It could be that the CASNR Cares program could be made even more effective if it integrated peer role models (based on Rendon et al.'s model), though perhaps these role models are established through

CASNR in more informal ways, due to this college being a relatively small community within the larger university system.

However, it is sometimes the case that although students are being offered adequate amounts of support from their college and from others, they are unsure of how and when to accept it or reach out for it. This may especially be true of rural students, who come from cultures where self-reliance is respected (Wagonfeld, 2003; and, as this project's results demonstrate, help-seeking attitudes for professional psychological help were lower among rural students than urban students). Programming that promotes the importance and acceptability of "leaning on others" during their transition to college may also serve useful in helping students build their social support networks.

Additionally, helping students be able to utilize existing social support networks (i.e., parent support, community support), as well as educating parents on how best they can support their students, may be beneficial for fostering social support. Educating students on ways to keep in touch with their parents (e.g., setting aside time each week for phone conversations or video conferencing with parents, utilizing social networking sites such as Facebook, planning visits) may be helpful. Though efforts such as these may seem like overkill (i.e., ways to keep in touch with one's parents should be obvious), this kind of programming could have the side effect of normalizing and de-stigmatizing contact with parents and reaching out for support.

On the other side of this, parents often are unsure of the best way to support their college student, especially if this support has to come from afar. This may especially be the case for rural parents, who are at an increased chance of never having been to college themselves (Gibbs, 2000) and thus lacking firsthand experience of what it is like to be at

college. The education of parents of potentially college-bound students could begin much earlier than it does now, which generally happens—if it happens at all—at the student's commencement of their college career (e.g., student orientation). Parents, especially those unfamiliar with college environments, could start receiving information about colleges and how best to talk to their child about college and support their child throughout the transition to college while their child is still in high school. College officials (i.e., recruitment staff) could travel to various high schools to offer educational seminars to parents on matters such as these, as well as issues like how to finance college, what courses best help students prepare for college, and what else students and families can be doing now to prepare (not just academically, but also socially and emotionally) for college. Ideally high school guidance counselors would also be involved in efforts to educate parents on the role of social support early on in the college-seeking process; however, it should also be mentioned that many rural schools go without guidance counselors due to administrative staff shortages in rural areas (Beeson & Strange, 2000), and rural students have been shown to often by-pass counselors and seek college information from other sources, such as teachers or parents (Griffin, Hutchins, & Meece, 2011). Additionally, even many urban schools do not have enough guidance counselors to truly meet student demand (e.g., see Richards, 2010) especially in the current financial situations of many publicly-funded schools. It may be up to colleges to fill in information gaps for college hopeful students and parents.

Involving parents in student orientation and offering specific, targeted suggestions on finding balance between being supportive of students without being overbearing is also recommended. An additional suggestion is that colleges mail parents periodic

newsletters that would give an idea of what a student might be going through developmentally at given times throughout the year, common problems that first-year students struggle with, and offer guidance on what kinds of support students might need to deal with these developmental tasks and concerns (e.g., might students need more expressive support, or are there tangible items that a student might need at this time?). Further, colleges could carve out specific “parents’ weekends” for first-year students that would involve opportunities for parents to visit their students at college, tour their classrooms and dorms, meet their professors and friends, and so forth. Based on the finding that rural students are more likely than urban to be from families that struggle financially (US Census Bureau, 2010), and because of the travel costs incurred, ideally colleges would be able to fund all or part of these visits, or at least provide needs-based scholarship applications for such opportunities. Opportunities such as this may provide a first-year student with some sense of continuity between home and college and also provide parents ample time to show support of their student. Getting parents involved in supporting and encouraging their college students was also noted as an important aspect in Rendon et al.’s cultural model of student-college interaction.

Based on this study’s results, one way that a parent might be able to show social support is by giving their child permission, or even encouraging their child, to intentionally decrease the amount of social and/or familial obligation that he or she has to his or her high school community. Because social barriers to investment were found to be a significant negative contributor to adjustment, especially among rural students, decreasing these commitments may serve in enhancing adjustment. (However, as barriers to social investment were also shown to have a significant *positive* simple correlation

with social support, it could also be the case that decreasing obligation to life back home would serve in detracting from one's sense of social support, which could—based on this study's results—have a detrimental effect on well-being and adjustment to college.

Further research is needed in this area, as is detailed in a latter section.)

*Social self-efficacy.* Though this researcher was initially curious about the social self-efficacy of rural students in particular, the results of this project's analyses suggest that all incoming students, regardless of locale of origin, may benefit from having a sound sense of social-self efficacy. Analyses revealed that social self-efficacy had a significant and positive simple relationship with college adjustment, as well as serving as a unique predictor of adjustment in regression and a casual predictor of adjustment in SEM (through the mediator of well-being), across student groups.

The cumulative evidence from this study suggests that working with students on boosting social self-efficacy could enhance their college adjustment, not to mention their sense of well-being. An obvious next question is: What are the best practices for bolstering a student's sense of social self-efficacy? Unfortunately, studies that can empirically demonstrate how one might make a college student feel more efficacious in social settings (i.e., intervention studies on college students) are not yet available. However, based on empirically-validated social skill-building programs for children (see, e.g., Sheridan, 1995), a group format may be optimally effective and efficient for promoting social self-efficacy in college students.

College counseling centers offer promise for being able to build, promote, and conduct structured social self-efficacy building interventions on campuses, as counseling centers are staffed by professionals trained in these areas, and often have the capacity to

work with students in both individual and group formats. That being said, there is often a certain stigma attached to seeking professional psychological help among college students (e.g., Vogel, Wade, & Hackler, 2007), especially for men (Gillon, 2007), and this study found that rural students did report less favorable help-seeking attitudes than did rural students. Thus if colleges rely only on formalized, targeted interventions that happen only at college counseling centers, large cross-sections of students who could potentially benefit from social self-efficacy boosting may be missed.

Might there also be ways to build social self-efficacy among students in less structured ways, perhaps in less formal, “do-it-yourself” setting that might be more palatable to those with stigmatic beliefs about seeking help at a college counseling center? Bandura (1997) asserted that there are four sources of information from which people form self-efficacy beliefs: performance accomplishments, vicarious learning/modeling, anxiety management, and social persuasion. It seems that if at least some of the four channels of efficacy information are being gained by participation in a given activity, students may still stand to benefit from it in terms of self-efficacy. For example, social “mixers,” or other social events during college often give students opportunities to try out their social prowess. Presumably, students would receive information about their performance from watching themselves succeed or fail in their interactions and find models of social interaction (and act as models for others). Social persuasion may be prominent in these settings, as succeeding socially might have other desired outcomes, such as a new friend, a date, or a job. However, a less structured opportunity would come with a few disadvantages. At least one source of self-efficacy information, anxiety management (Bandura, 1997), would be left relatively unchecked.

Additionally, while students may find models of social behavior at any given social event, they may not be *good* models. In a more structured setting, group leaders and individual therapists can help to moderate what information and skills students might take away from interactions with one another. Finally, it is likely that the students who need the most help with social self-efficacy are also those who are least likely to participate in such naturalistic social skill-building opportunities.

So, on one end of the spectrum of intervention possibilities are highly structured programs offered at college counseling centers; at the other end, unstructured social events. It may be that a hybrid of these two approaches may find some balance between providing students with necessary guidance and structure while also seeming approachable and naturalistic. Incoming students could be invited or required to participate in a small group with some stated purpose (e.g., peer mentoring, activity group, academic group, athletics, etc.), which would meet at a neutral location or popular campus meeting place (i.e., not in the college counseling center). The group would have a leader, perhaps most effectively someone who splits the difference between peer and authority (such as an upperclass student) who would be trained in how to facilitate social interactions, modeling appropriate behavior and tactfully rewarding “good” social behaviors while providing constructive feedback for “bad” social behaviors, and aiding in the reduction of anxiety in novel social settings. For this type of program, residence life staff, such as Resident Assistants, may be especially well positioned to serve as group leaders. Counseling and mental health professionals may be a good fit for advising these types of groups, as they would have the knowledge and resources to provide ongoing training and supervision for the peer group leaders.



It is likely that many institutions already offer some version of the three types of potential social self-efficacy building interventions described above. Yet importantly, institutions must take steps to make sure that students are being appropriately referred or “funneled” into skill-building opportunities that provide a good fit for them. For example, students who come to college with a fairly intact sense of social self-efficacy might benefit most from something on the more informal side, and such students are probably likely to seek out or encounter these opportunities on their own volition. On the other hand, a rural male student really struggling with social-self efficacy might be a great candidate for a more structured opportunity, yet would be very unlikely to seek help due to the compounding effects of belonging to two groups that tend to be under-utilizers of psychological help opportunities (i.e., rural: Sears, 2004; men: Addis & Mahalik, 2003). For situations like this, which are bound to come up in a college environment, it seems that an institution has a few choices (and these are not exclusive): 1) require or strongly encourage all students to participate in some kind of peer-led group, as in the hybrid intervention described above, as a preventative measure and/or, 2) work to decrease the stigma of help-seeking, especially among the populations that struggle the most with this.

Furthermore, there is no reason that college-hopeful students cannot start on their journeys to becoming more socially efficacious before even arriving at college, which may enhance their first-year adjustment process. High schools could offer structured and unstructured opportunities for social growth, and perhaps provide some form of education on what kinds of social skills might be helpful to have in college (e.g., how to: start a conversation, ask someone to coffee, join in with an already existing group, talk to

professors, take a leadership role, interact with someone much different than yourself, etc.).

*Well-being.* Well-being was clearly related to college adjustment across analyses in this study. In fact, in multivariate analyses it was a strong unique predictor of adjustment, and in the case of urban students, the *only* direct predictor of college adjustment. Structural equation modeling revealed that well-being acted a significant mediator between social self-efficacy and adjustment, and between social support and adjustment. Based on these results, it would appear that creating programs and making other efforts to enhance students' senses of well-being would greatly behoove institutions of higher education in their efforts to help first-year students acclimate to college. As social support and social self-efficacy were both found to be significant predictors of student well-being, the programs and suggestions for bolstering these constructs in students are likely to directly boost well-being (which would then boost adjustment, as well-being would act as a mediator).

Thus this study unearths some of the potential contributors to a student's sense of well-being, yet there are bound to be many more that have not yet been considered or examined by research. Facets of college life such as college and campus climate (i.e., the social and cultural climate), available support services, size of college, student-faculty ratios, etc., may well contribute to a student's sense of well-being, not to mention static intrapersonal factors such as optimism, locus of control, attachment, and so forth. Services such as Counseling and Psychological services on campuses are likely to help build students' sense of well-being, though most research in this area focuses more on ameliorating psychological and behaviors problems (e.g., Apfel, 2003, Eisen, Kushner,

McLeod, Queen, Gordon, & Ford, 2003) to a greater extent than it does enhancing well-being, and as has been asserted many times throughout this dissertation, resilience is more than the flip-side of risk (Rutter, 1987), and psychopathology and subjective well-being are not necessarily at two ends of the same pole, but represent separate (yet related) constructs (Eklund, et al., 2011). Because studying well-being rather than “lack of disturbance” represents somewhat of a paradigm shift, colleges may well also want to consider an analogical paradigm shift: how do we help students not just survive, but flourish, at college? This sense of flourishing appears to be strongly and directly related to college adjustment, at least based on the result of this study, so it is an important question to begin working on answers to. Further research in this area is needed.

### *Limitations*

As any research project inevitably does, this project comes with various potential limitations that must be taken into consideration. These limitations are explored in-depth below.

*Design issues.* This project utilized self-report methods, which some may consider to be “inherently flawed” within an objectivist paradigm of research. As self-report measures cannot deliver the “truth,” but only a person’s perception of the truth, some might object to the validity of self-report information. Yet, for this study in particular, *perception* of social traits was considered to be as important as the actual trait itself. For example, assessing a student’s perception of her social self-efficacy was, in this author’s opinion, just as informative (if not more so, for this study) as direct observation of her social behaviors, for beliefs and skill are both key to understanding self-efficacy. A notable exception to this general attitude on the part of the researcher applies most

strongly to the dependent variable, college adjustment. Utilizing one objective measure of adjustment, such as GPA (as pulled from the student's transcript), would have provided useful information about adjustment that went beyond a student's perception of his or her adjustment to college. However, delving into student's school records went beyond the scope and confidentiality limitations of this project, and asking a student to report his or her GPA would have simply become another self-report item. Additionally, as is discussed in the introduction to this project, GPAs are generally not even calculated yet for first-year students in their first weeks of class, which is when data for this project was gathered.

One aspect of self-report data collection that may be especially important to consider for future projects like this is social desirability, which was unfortunately not assessed in this study. Previous research has found that college students in a university setting are likely to engage in positive impression management to researchers (e.g., Theirault & Holmberg, 1998); additionally, students from rural areas may be especially prone to inflate positive attributes and minimize negative aspects of themselves due to coming from the "goldfish bowl" environment of small communities (Slama, 2004), where social behaviors are closely scrutinized by others. (This idea is discussed in more depth in an earlier portion of the discussion section). Skewing in reporting was possible on all questionnaires administered in this study.

Beyond the issue of self-report measures, this study utilized a cross-sectional design. So, what this study does is provide a rather static snapshot of the adjustment of many students at one specific (though strategically chosen) period of time. However, adjustment is not a static construct; rather, it is malleable and given to wax and wane

within the student's experiences of self, others, and the environment at college. Utilizing a longitudinal design might have been more informative for at least three reasons: 1) it could have assessed the relationship between reported adjustment at more than one period of time (pre- and post- design), 2) it could potentially have ascertained which students did eventually drop out of college, which would have given the researcher the opportunity to assess how each construct of interest related to a student's risk of dropping out of college, and on the other hand, it would have also given information on which students showed improvements in adjustment and what constructs correlated with that, 3) more evidence for a causal model of student adjustment could have emerged.

*Methodological issues.* The sampling strategy used in this study was somewhat purposive rather than random. For example, the researcher recruited within lecture courses in the College of Agriculture and Natural Resources because she was aware that large numbers of rural students would be enrolled in classes within this college. Additionally, students were self-selected for this study based on the fact that they chose whether or not they wanted to participate. Both purposive sampling and self-selection come with potential threats to the validity of this study.

Another threat to the external validity of this study involves the institution at which this data was collected. A majority of the participants lived on the East Campus of the University of Nebraska-Lincoln (UNL), which has traditionally been a "safe haven" of sorts for students from rural areas and offers multiple formal and informal opportunities for smaller-group interactions. In essence, East Campus is a small community within the larger UNL community, and this may have confounded the results of this study. The same study conducted at a large University without a community like

East Campus may yield different results. Additionally, all participants in this study all attended the one large Division I school in the state of Nebraska, and many people across the state feel a sense of kinship and identification with this institution. The fact that all participants in this study attended this particular institution limits its potential generalizability to other states and regions, especially those areas of the country where students may have a variety of university (and other community) allegiances to choose from. Further, this sample was quite racially homogenous in that 95 percent of participants were White, which limits its generalizability to diverse populations.

Additionally, path analysis and structural equation modeling, though they give us some indication of potential casual models, cannot actually “prove” the existence or the direction of casual relationships. The fit indices of the models can give information as to how plausible a model is in the sample that is studied, yet other equally plausible models might exist for the same data, or the model might not fit with other data (i.e., a different sample). Further, equivalent models with a reversed direction of causality between constructs may also exist. Longitudinal design or some form of experimental manipulation to test groups, including random sampling and assignment (and it would of course be impossible to randomly assign students to “urban” or “rural” groups), would be necessary to determine truly casual relationships.

*Social investment at college construct and questionnaire.* Because this researcher created a previously untested measure to be used to assess social barriers to social investment at college, the reliability and validity of this measure must also be taken into consideration. As discussed in the results section, the alpha coefficient for the social investment at college questionnaire in this sample was .58, which falls below the standard

(e.g., .70) for adequate internal consistency. Thus it could be that the items used in this scale are actually tapping into two or more different constructs. For instance, it could be that barriers to social investment has multiple facets, such as practical (i.e., having a job off-campus) versus psychological (i.e., a desire to invest in a new peer group at college) barriers, and some of these barriers align more with social support and well-being than do others. (Theoretical considerations of the social investment construct and its measurement are explored in-depth in an earlier portion of this discussion.)

Because this was its inaugural use, validity of this scale also had not been previously established (e.g., construct validity has not been explored by studying correlations between social barriers to college investment and similar constructs, such as social capital or friendsickness at college). Data from this study demonstrated a significant negative relationship between barriers to social investment and social adjustment to college ( $r = -.188, p < .001$ ), meaning that as a student reported more barriers to social investment, their reported social adjustment at college decreased. A significant negative relationship between social barriers and institutional adjustment was also found ( $r = .185, p = .004$ ), suggesting that as students reported more barriers to social investment at college, they tended to also feel less attached to their particular college and to the idea of college in general, including their commitment to and confidence about finishing their degree. These findings may provide some evidence of construct validity. However, a significant *positive* correlation between barriers to social investment at college and social support ( $r = .20, p < .001$ ) was also found, meaning that the more barriers participants reported, the more social support they tended to report. Further, this study's results (as well as the majority of previous research in the area) also show that social support has a

definitive *positive* relationship to college adjustment. So, the positive social support/social barriers relationship may complicate the matter of construct validity of the barriers to social investment questionnaire. Though this author conceptualized barriers to social investment as a detractor from one's potential college adjustment, it could also be the case that because many of the items deal with social ties and relationships (e.g., the maintenance of friendships and ties to people and places off-campus), "barriers" to social investment are not "barriers" at all, but perhaps something else. Perhaps some or all of these factors may actually serve as resilience factors. It could also be that a student's individual perception of their off-campus obligations and connections is key to further understanding of this construct. Some students are stressed by their off-campus obligations and by their attempts to maintain ties to their "old lives," yet for some students, these obligations and ties may be the fuel that sustains them in college, that give them a sense of agency, purpose, and social connection. This difference would depend heavily the perspective and meaning that students make of their off-campus lives, and the questionnaire used for this study did not tap into this cognitive and emotional component in any great detail. Further investigation around the idea of social investment at college, especially because even with sub-par reliability this scale was a significant contributor in analyses, is recommended, including further refinement and testing of the social investment construct per sé.

### *Future directions*

Research often results in more questions than it does definitive answers, and this study is no exception. Due to the unanswered questions that this project has unveiled, brief statements about "further research being needed/recommended" are dispersed



throughout this discussion. This section will summarize these recommendations and give an overview of potential future research directions gleaned from what was learned (and not learned) by performing this study.

*Rural research.* This project examined objective versus subjective definitions of “rurality” and found a high correlation between the two. Yet to truly determine best practices for how researchers might define both “rural” and “urban” in future studies, continued research on how well people estimate how accurately they perceive their own rurality must be carried out. Research that focuses on various populations (i.e., community members rather than only college students, adults of various ages, adults still living in rural areas, etc.) would be helpful in ascertaining the accuracy of various populations in their self-perceptions. Additionally, continued empirical research on what attributes characterize rural living and culture, including the experience of social relationships in rural areas, and how these attributes relate to a person’s sense of well-being, would be helpful in understanding the role of well-being in college adjustment among incoming college students, and perhaps in understanding the mental health and well-being of rural residents more broadly.

*Longitudinal research.* Longitudinal research on college adjustment offers the promise of providing an increasingly deep understanding of the college adjustment process, for first year students and beyond. Questions that might be addressed through longitudinal research could include, but would not be limited to:

- a) Are there group differences (i.e., rural versus urban, traditional versus non-traditional students) in adjustment based on time of the year?

- b) Are there adjustment path differences between rural and urban students across several years of college?
- c) Does the rural versus urban difference in psychological help-seeking attitudes persist past the first year?
- d) What students, based on their earliest adjustment scores and relevant demographic data, are most at risk for drop-out for students, or are most poised for success in college? In other words, longitudinal data might make the identification of risk and resilience factors for college adjustment even more clear.

*Social desirability.* Future survey studies in the area of college adjustment would be wise to incorporate a measure of social desirability in order to control for this potential confounding variable. Additionally, researchers could examine differences between rural and urban students in terms of their social desirability.

*Social investment at college.* As has been demonstrated throughout this discussion, this research has truly resulted in more questions than answers about the social investment construct. Future research could include continued conceptual refinement and exploration about the meaning of “investment” at college, as well as what barriers to that investment might be (including assessing cognitive and emotional components, such as if the student perceives each “barrier” to be positive or negative) and further refinement and validation of a measure that could assess this construct.

Haller and Virkler (1993) observed that rural students often have obligations to return to the rural community after college. Thus, it could also be the case that some rural students (i.e., those planning to return to their communities) take paradigmatically

different approaches to adjustment to college, which could in turn affect their perception of obligations to home (i.e., “barrier to new life” versus “staying established in the community”). It could be that rural students who intend to return to their hometowns or another rural area after college may see divestment in their former lives as unnecessary or even counterproductive. This study did not ask students about their future plans, though this would have made an interesting contribution to the field of knowledge on rural students and their college adjustment. Further investigation on social barriers that takes this factor into consideration is recommended.

*Help-seeking.* This study found that even though rural students did report significantly more negative psychological help-seeking attitudes than did urban students, rural and urban students had statistically equal self-reported adjustment to college. Additionally, help-seeking did not contribute to adjustment in any multivariate analyses, nor did it have a simple correlation with any of the constructs of interest. Based on these results, it looks as though colleges need not worry about enhancing help-seeking attitudes in order to boost adjustment of first-year students. However, this study adopted a rather narrow vision of help-seeking by studying only attitudes on seeking professional psychological help. It may be helpful and informative for future research to address help-seeking more broadly, encompassing areas such as seeking help from informal sources and utilizing available academic help (e.g., tutoring, advising). Further, coming up with ways to study student’s actual help-seeking behaviors (not just attitudes) as they are relevant to student adjustment may be an essential contribution to the field of knowledge on this subject.

*Replication of current study.* Due to the potentially confounding variable of UNL's East Campus community, replicating this study on another campus may provide different—and potentially telling—results. If replication of the study were to take place, the author would recommend making changes to the included constructs based on the information on social investment and help-seeking offered above and including a social desirability measure.

*Intervention research.* Various potential means of intervening with students to enhance their adjustment to college are given in this discussion, especially interventions that center around building social support, social self-efficacy, and well-being. That being said, none of these suggestions have been evaluated for their effectiveness; thus, they may or may not be helpful in boosting social support, etc., and correspondingly, adjustment. Evaluation research on specific programs (which may have to be “manualized” or standardized in some way in order to effectively study them) as they relate to college adjustment is necessary and especially pertinent at the current time, given that intervention studies of this nature (e.g., social skill building for college students, self-efficacy enhancement, well-being enhancement) are few and far between.

*Qualitative research.* This researcher has walked away from this project with resultant questions that may best be answered through qualitative research. For example, Slama (2004) writes about the goldfish bowl effect of living in a rural community, yet how rural individuals experience this phenomenon (i.e., how it affects their perceptions of self, others, and the world, and their day-to-day functioning) is at this point presumed rather than empirically demonstrated. Phenomenological research on the goldfish bowl effect could prove fascinating and helpful for a deeper understanding of rural life and

culture. Additionally, the subjective experiences of a rural student at college are still worth considering; even though no adjustment differences were found in this study, adjustment is not the only variable that makes a difference in one's college experience and functioning. Qualitative research on rural experiences in particular may help researchers and practitioners understand what potential differences *are* perceived by rural students, and future quantitative studies could be designed around the results of the qualitative analyses.

Further, qualitative work on other small or relatively "closed" communities may be eye-opening. It may be that some of the common characteristics of rural areas are present in other areas that may not be considered "rural," but may be small, intimate, exclusive, and/or somehow isolated from a larger group. Therefore, it may be something about the kind of community, rather than the locale per se (rural versus urban) of that community, that truly creates its defining characteristics. Qualitative research, such as case studies or phenomenologies, may be helpful in providing a more comprehensive understanding of what defines small, intimate communities.

*Summary.* Though rurality may not affect college adjustment per sé, rurality does show potentially nuanced influences on adjustment when taken into consideration with other social constructs, most prominently social support, social self-efficacy, and well-being. Results of this study suggest that efforts to enhance students' social support (i.e., either in its provision or its acceptability to students), social self-efficacy, and well-being may in turn boost adjustment amongst college students. Further research, including research on rural populations and more intervention research, is recommended.

## References

- Adan, A. M., & Felner, R. D. (1995). Ecological congruence and adaptation of minority youth during the transition to college. *Journal of Community Psychology*, 23, 256-269.
- Addis, M., & Mahalik, J. (2003). Men, masculinity, and the contexts of help seeking. *American Psychologist*, 58, 5-14.
- Apfel, J. (2003). Depression and its treatments: A college sample. *Journal of College Student Psychotherapy*, 18 (2), 67-81.
- Archer, J., & Lamnin, A. (1985). An investigation of personal and academic stressors on college campuses. *Journal of College Student Personnel*, 26, 210-215.
- Astin, A.W. (1985). *Achieving educational excellence: A critical assessment of priorities and practices in higher education*. San Francisco: Jossey-Bass.
- Baker, R. W., McNeil, O. V., & Siryk, B. (1985). Expectation and reality in freshman adjustment to college. *Journal of Counseling Psychology*, 32, 94-103.
- Baker, R. W., & Siryk, B. (1980). Alienation and freshman transition into college. *Journal of College Student Development*, 21, 437-442.
- Baker, R. W., & Siryk, B. (1984). Measuring adjustment to college. *Journal of Counseling Psychology*, 31, 179-189.
- Baker, R. W., & Siryk, B. (1989). SACQ Test Manual. Los Angeles: Western Psychological Services.

- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84, 191-215.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W.H. Freeman.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Bayer, J.K., & Peay, M.Y. (1997). Predicting intentions to seek help from professional mental health services. *Australian and New Zealand Journal of Psychiatry*, 31, 504-513.
- Beck, R., Taylor, C., & Robbins, M. (2003). Missing home: Sociotropy and autonomy and their relationship to psychological distress and homesickness in college freshmen. *Anxiety, Stress & Coping: An International Journal*, 16, 155-166.
- Beeson, E., & Strange, M. (2000). Why rural matters: The need for every state to take action on rural education. *Journal of Research in Rural Education*, 16(2), 63-140.
- Bennett, J.M. (1998). Transition shock: Putting culture shock in perspective. In M.J. Bennett, *Basic concepts of intercultural communication: Selected readings* (pp. 215-233). Yarmouth, ME: Intercultural Press, Inc.
- Bettencourt, B. A., Charlton, K., Eubanks, J., Kernahan, C., & Fuller, B. (1999). Development of collective self-esteem among students: Predicting adjustment to college. *Basic & Applied Social Psychology*, 21, 213-222.

- Bettencourt, B.A., Talley, A.E., Molix, L., Schelegel, R., & Westgate, S.J. (2008). Rural and urban breast cancer patients: Health locus of control and psychological adjustment. *Psycho-oncology*, 17, 932-939. DOI: 10.1002/pon.1315.
- Bitz, A. (2008). Emergency caregivers: The psychological experience. Unpublished poster presented at the International Counseling Psychology Conference, March 8, 2008.
- Bland, S. (2010). Obama aims to lift college graduation rates, but his tools are few. *The Christian Science Monitor*. Retrieved August 15, 2011 from <http://www.csmonitor.com/USA/Education/2010/0809/Obama-aims-to-lift-college-graduation-rates-but-his-tools-are-few>.
- Boulter, L. T. (2002). Self-concept as a predictor of college freshman academic adjustment. *College Student Journal*, 36, 234-247.
- Bramston, P., & Patrick, J. (2007). Rural adolescents experiencing an urban transition. *Australian Journal of Rural Health*, 15, 247-251.
- Bushong, S. (2009). Freshman Retention Drops, Except at 2-Year Colleges. *Chronicle of Higher Education*, 55 (21), A17.
- Canty-Mitchell, J., & Zimet, G.D. (2000). Psychometric properties of the multidimensional scale of perceived social support in urban adolescents. *American Journal of Community Psychology*, 28(2), 391-400.
- Carson, L.R. (2009). "I am because we are": Collectivism as a foundational characteristic of African American college student identity and academic achievement. *Social Psychology of Education*, 12(3), 327-344. DOI: 10.1007/s11218-009-9090-6.



CASNR Cares (2011). Retrieved June 10, 2011 from

<http://casnr.unl.edu/CurrentStudents/CASNRCares>.

Cellucci, T., Krogh, J., & Vik, P. (2006). Help seeking for alcohol problems in a college population. *Journal of General Psychology*, 133, 421-433.

Chang, E. C. (1996). Cultural differences in optimism, pessimism, and coping: Predictors of subsequent adjustment in Asian American and Caucasian American college students. *Journal of Counseling Psychology*, 43, 113.

Chang, E. C. (1998). Hope, problem-solving ability, and coping in a college student population: Some implications for theory and practice. *Journal of Clinical Psychology*, 54, 953-962.

Chimonides, K. M., & Frank, D. I. (1998). Rural and urban adolescents' perceptions of mental health. *Adolescence*, 33, 823-832.

Cohen, P., & Hesselbart, C.S. (1992). Demographic factors in the use of children's mental health services. *American Journal of Public Health*, 82, 49-52.

Coleman, J.S. (1988). Social capital in the creation of human capital. *The American Journal of Sociology*, 94, 95-120.

Coleman, M., Ganong, L. H., Clark, J. M., & Madsen, R. (1989). Parenting perceptions in rural and urban families: Is there a difference? *Journal of Marriage & Family*, 51, 329-335.

- Connolly, J. (1989) "Social self-efficacy in adolescence: Relations with self-concept, social adjustment and mental health." *Canadian Journal of Behavioural Science*, 21(3), 258-269.
- Constantine, M. G., Chen, E. C., & Ceesay, P. (1997). Intake concerns of racial and ethnic minority students at a university counseling center: Implications for development programing and outreach. *Journal of Multicultural Counseling & Development*, 25, 210-218.
- Cooke, R., Bewick, B. M., Barkham, M., Bradley, M., & Audin, K. (2006). Measuring, monitoring and managing the psychological well-being of first year university students. *British Journal of Guidance & Counselling*, 34, 505-517.
- Corrigan, P. (2004). How stigma interferes in mental health care. *American Psychologist*, 59(7), 614-625.
- Costello, E.J., Burns, B.J., Angold, A., & Leaf, P.J. (1993). How can epidemiology improve mental health services for children and adolescents? *Journal of the American Academy of Child & Adolescent Psychiatry*, 32, 1106-1114.
- Crockett, L. J., Iturbide, M. I., Torres Stone, R. A., McGinley, M., Raffaelli, M., & Carlo, G. (2007). Acculturative stress, social support, and coping: Relations to psychological adjustment among mexican american college students. *Cultural Diversity and Ethnic Minority Psychology*, 13, 347-355.
- Cutrona, C.E. , Halvorson, M.B.J. & Russell, D.W. (1996). Mental health services for rural children, youth, and their families. In C.A. Heflinger, & C.T. Nixon (Eds.),

*Families and the mental health system for children and adolescents: Policy, services, and research* (pp. 217-237). London: Sage.

Dahlem, N.W., Zimet, G. D., & Walker, R. R. (1991). The Multidimensional Scale of Perceived Social Support: A confirmation study. *Journal of Clinical Psychology*, 47, 756–761.

Desjardins, S. L., Ahlburg, D. A., & McCall, B. P. (2002). A temporal investigation of factors related to timely degree completion. *Journal of Higher Education*, 73, 555-581.

DeStefano, T. J., Mellott, R. N., & Petersen, J. D. (2001). A preliminary assessment of the impact of counseling on student adjustment to college. *Journal of College Counseling*, 4, 113.

Dyson, R., & Renk, K. (2006). Freshmen adaptation to university life: Depressive symptoms, stress, and coping. *Journal of Clinical Psychology*, 62, 1231-1244.

Efron, B. (2000). The bootstrap and modern statistics. *Journal of the American Statistical Association*, 95, 1293–1296.

Eimers, M. T., & Pike, G. R. (1997). Minority and nonminority adjustment to college: Differences or similarities? *Research in Higher Education*, 38, 77-97.

Eisen, A., Kushner, H., McLeod, M., Queen, E., Gordon, J., & Ford, J.L. (2009). An integrated approach to addressing addiction and depression in college students. *Journal of the American College Health Association*, 57(4), 455-456.

- Eklund, K., Dowdy, E., Jones, C., Furlong, M. (2011). Applicability of the dual-factor model of mental health for college students. *Journal of College Student Psychotherapy*, 25(1), 79-92.
- Enochs, W. K., & Roland, C. B. (2006). Social adjustment of college freshmen: The importance of gender and living environment. *College Student Journal*, 40, 63-73.
- Esterman, K., & Hedlund, D. (1995). Comparing rural adolescents from farm and nonfarm families. *Journal of Research in Rural Education*, 84-91.
- Estrada, L., Dupoux, E., & Wolman, C. (2006). The relationship between locus of control and personal-emotional adjustment and social adjustment to college life in students with and without learning disabilities. *College Student Journal*, 40, 43-54.
- Evans, N.J., & Reason, R.D. (2001). Guiding principles: A review and analysis of student affairs philosophical statements. *Journal of College Student Development*, 42, 359-377.
- Fan, C., & Mak, A.S. (1998). Measuring social self-efficacy in a culturally diverse student population. *Social Behavior and Personality*, 26(2), 131-144.
- Feenstra, J. S., Banyard, V. L., Rines, E. N., & Hopkins, K. R. (2001). First-year students' adaptation to college: The role of family variables and individual coping. *Journal of College Student Development*, 42, 106-113.
- Ferrari, J.R., & Parker, J.T. (1992). High school achievement, self-efficacy, and locus of control as predictors of freshman academic performance. *Psychological Reports*, 71, 515-518.

- Finder, A. (2008). Decrease in high school graduates will increase college admission rates. *New York Times*, March 11, 2008.
- Fischer, E.H., & Turner, J.L. (1970). Orientations to seeking professional help: Development and research utility of an attitude scale. *Journal of Consulting & Clinical Psychology*, 35, 79-89.
- Fischer, E. H., & Farina, A. (1995). Attitudes toward seeking professional psychological help: A shortened form and considerations for research. *Journal of College Student Development*, 36, 368-373.
- Fischer, M. J. (2007). Settling into campus life: Differences by Race/Ethnicity in college involvement and outcomes. *Journal of Higher Education*, 78, 125-161.
- Fisher, S., & Hood, B. (1987). The stress of the transition to university: A longitudinal study of psychological disturbance, absent-mindedness and vulnerability to homesickness. *British Journal of Psychology*, 78, 425.
- Fletcher, P. C., & Skinner, K. (2006). Do drinking practices at university differ among students coming from urban and rural centers? a preliminary examination of knowledge, attitudes and beliefs. *College Student Journal*, 40, 332-342.
- Freeberg, A.L., & Stein, C.H. (1996). Felt obligation towards parents in Mexican-American and Anglo-American young adults. *Journal of Social and Personal Relationships*, 13(3), 457-471. DOI: 10.1177/0265407596133009.
- Friedlander, L. J., Reid, G. J., Shupak, N., & Cribbie, R. (2007). Social support, self-esteem, and stress as predictors of adjustment to university among first-year undergraduates. *Journal of College Student Development*, 48, 259-274.

- Gabriel, M. (2006). Youth migration and social advancement: How young people manage emerging differences between themselves and their hometown. *Journal of Youth Studies*, 9, 33-46.
- Gale, J. A., & Deprez, R. D. (2003). A public health approach to the challenges of rural mental health service integration. In B. H. Stamm (Ed.), *Rural behavioral health care: An interdisciplinary guide* (pp. 95-108). Washington, DC: American Psychological Association.
- Gallagher, M. W., Lopez, S. J., & Preacher, K. J. (2009). The hierarchical structure of well-being. *Journal of Personality*, 77, 1025-1049.
- Gamm, L. D. (2004). Mental health and substance abuse services among rural minorities. *Journal of Rural Health*, 20, 206-209.
- Gelso, C., & Fretz, B. (2001). *Counseling psychology*. Belmont, CA: Wadsworth Group/Thomson Learning.
- Gerdes, H., & Mallinckrodt, B. (1994). Emotional, social, and academic adjustment of college students: A longitudinal study of retention. *Journal of Counseling & Development*, 72, 281-288.
- Gibbs, R.M. (2000). The challenge ahead for rural schools. *Forum for Applied Research and Public Policy*, 15 (1), 82-87.
- Gillon, E. (2007). Gender differences: In help seeking. *Healthcare Counseling & Psychotherapy Journal*, 7, 10-13.

- Graves, L. (2008). The Gap in Graduation Rates. The gap in graduation rates. *U.S News & World Report*, 144(13), 62-63.
- Griffin, D., Hutchins, B.C., & Meece, J.L. (2011). Where do rural high school students go to find information about their futures? *Journal of Counseling and Development*, 89(2), 172-181.
- Haemmerlie, F. M., Steen, S. C., & Benedicto, J. A. (1994). Undergraduates' conflictual independence, adjustment, and alcohol use: The importance of the mother-student relationship. *Journal of Clinical Psychology*, 50, 644-650.
- Halfacree, K. (1995). Talking about rurality: Social representations of the rural as expressed by residents of six English parishes. *Journal of Rural Studies*, 11, 1-20.
- Haller, E.J., & Virkler, S.J. (1993). Another look at rural-nonrural differences in students aspirations. *Journal of Research in Rural Education*, 9,(3), 170-178.
- Hannum, J. W., & Dvorak, D. M. (2004). Effects of family conflict, divorce, and attachment patterns on the psychological distress and social adjustment of college freshmen. *Journal of College Student Development*, 45, 27-42.
- Health Resources and Services Administration. (1992). Mental health providers: Supply and distribution. *Rural Health Professions Facts*. Washington, DC: Author.
- Hersh, M. A., & Hussong, A. M. (2006). High school drinker typologies predict alcohol involvement and psychosocial adjustment during acclimation to college. *Journal of Youth & Adolescence*, 35, 738-751.

Holmbeck, G.N. (1997). Toward terminological, conceptual, and statistical clarity in the study of mediators and moderators: Examples from the child-clinical and pediatric psychology literatures. *Journal of Consulting and Clinical Psychology*, 65(4), 599-610.

Hook, R. J. (2004). Students' anti-intellectual attitudes and adjustment to college. *Psychological Reports*, 94, 909-914.

Hu, L., & Bentler, P.M. (1999). Cutoff criteria for fit indices in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1-55.

Human, J., & Wasem, C. (1991). Rural mental health in America. *American Psychologist*, 46, 232-239.

Hurtado, S., Carter, D.F., and Spuler, A. (1996). Latino student transition to college: Assessing difficulties and factors in successful college adjustment. *Research in Higher Education*, 37(2), 135-157.

Hutz, A., & Martin, W. (2007). Understanding ethnocultural differences related to college adaptation for first-year undergraduate students. *College Student Journal*, 41, 1078-1088.

Hwang, W.C., Myers, H.F., Abe-Kim, J., & Ting, J.Y. (2008). A conceptual paradigm for understanding culture's impact on mental health: The cultural influences on mental health (CIMH) model. *Clinical Psychology Review*, 28, 211-227. doi: 10.1016/j.cpr.2007.05.001



- Ingels, S. J., Curtin, T.R., Kaufmann, P., Alt, M. N., & Chen, X. (2002). *Coming of age in the 1990's: The eighth-grade class of 1988 twelve years later*. (NCES 2002-321). Washington, DC: U.S. Department of Education, National Center for Education Statistics. Retrieved May 1, 2005 from <http://nces.ed.gov/pubsearch/Pubsinfo.asp?pubid=2002321>.
- Johnson, J., & Strange, M. (2007). Why rural matters 2007: The realities of rural education growth. US: Rural School and Community Trust.
- Johnson, M. K., Elder, G. H. J., & Stern, M. (2005). Attachments to family and community and the young adult transition of rural youth. *Journal of Research on Adolescence, 15*, 99-125.
- Kahneman, D., Diener, E., & Schwarz, N. (1999). *Well-being: The foundations of hedonic psychology*. New York: Russell-Sage.
- Kao, G. (2004). Social capital and its relevance to minority and immigrant populations. *Sociology of Education, 77*, 172-175.
- Kelleher, K.J., Taylor, J.L., & Rickert, V.I. (1992). Mental health services for rural children and adolescents. *Clinical Psychology Review, 12*, 841-852.
- Keller, P.A. & Murray, J.D. (Eds.). (1982). *Handbook of Rural Community Mental Health*. New York: Human Sciences Press.
- Kelly, A. E., & Achter, J. A. (1995). Self-concealment and attitudes toward counseling in university students. *Journal of Counseling Psychology, 42*, 40-46.
- Kelly, B.J., Stain, H.J., Coleman, C., Perkins, D., Fragar, L., Fuller, J., et al. (2010). Mental health and well-being in rural communities: The Australian Mental Health

Study. *Australian Journal of Rural Mental Health*, 18(1), 16-24. DOI: 10.1111/j.1440-1584.2009.01118.x.

Kenny, M. E., & Stryker, S. (1996). Social network characteristics and college adjustment among racially and ethnically diverse first-year students. *Journal of College Student Development*, 37(6), 649-658.

Kerr, S., Johnson, V.K., Gans, S.E., & Krumrine, J. (2004). Predicting adjustment during the transition to college: Alexithymia, perceived stress, and psychological symptoms. *Journal of College Student Development*, 45(6), 593-611.

Keyes, C. L. M. (1998). Social well-being. *Social Psychology Quarterly*, 61, 121-140.

Keyes, C. L. M. (2002). The mental health continuum: From languishing to flourishing in life. *Journal of Health and Social Behavior*, 43, 207-222.

Keyes, C.L.M., Shmotkin, D., & Ryff, C.D. (2002). Optimizing well-being: The empirical encounter of two traditions. *Journal of Personality and Social Psychology*, 82, 1007-1022.

Keyes, C. L. M. (2005). Mental illness and/or mental health? Investigating axioms of the complete state model of health. *Journal of Consulting and Clinical Psychology*, 73, 539-548.

Keyes, C. L. M. (2006). Mental health in adolescence: Is America's youth flourishing? *American Journal of Orthopsychiatry*, 76, 395-402.

Keyes, C. L. M. (2009). The nature and importance of mental health in youth. In R. Gilman, M. Furlong, & E. S. Heubner (Eds.), *Promoting Wellness in Children and Youth: A Handbook of Positive Psychology in the Schools* (pp.9-23). New York: Routledge.

- Kirby, D.K. & Conlon, M.C. (2005). Comparing the economic experiences of rural and urban university students. *Alberta Journal of Educational Research*, 51(1), 4-17.
- Kleinman, A. (1988). *Rethinking psychiatry: From a cultural category to personal experience*. New York: The Freeman Press.
- Klomegah, R.Y. (2006). Social factors relating to alienation experienced by international students in the United States. *College Student Journal*, 40(2), 303-315.
- Komiya, N., Good, G.E., & Sherrod, N.B. (2000). Emotional openness as a predictor of college students' attitudes toward seeking psychological help. *Journal of Counseling Psychology*, 47(1), 138-143. doi: 10.1037//0022-0167.47.1.138
- Lafreniere, K. D., & Ledgerwood, D. M. (1997). Influences of leaving home, perceived family support, and gender on the transition to university. *Guidance & Counseling*, 12, 14-18.
- Lapsley, D. K., & Edgerton, J. (2002). Separation-individualization, adult attachment style, and college adjustment. *Journal of Counseling & Development*, 80, 484.
- Lapsley, D. K., Rice, K. G., & FitzGerald, D. P. (1990). Adolescent attachment, identity, and adjustment to college: Implications for the continuity of adaptation hypothesis. *Journal of Counseling & Development*, 68, 561-565.
- Lapsley, D. K., Rice, K. G., & Shadid, G. E. (1989). Psychological separation and adjustment to college. *Journal of Counseling Psychology*, 36, 286-294.
- Larose, S., & Boivin, M. (1998). Attachment to parents, social support expectations, and socioemotional adjustment during the high school-college transition. *Journal of Research on Adolescence*, 8, 1-27.

- Laursen, B., & Collins, W. A. (1994). Interpersonal conflict during adolescence. *Psychological Bulletin*, 115, 197-209.
- Legutko, R. S. (1998). Family effect on rural high school students'. postsecondary decisions. *Rural Educator*, 20, 11-14.
- Lidy, K. M., & Kahn, J. H. (2006). Personality as a predictor of first-semester adjustment to college: The mediational role of perceived social support. *Journal of College Counseling*, 9, 123-134.
- Looker, E. D., & Dwyer, P. (1998). Education and negotiated reality: Complexities facing rural youth in the 1990s. *Journal of Youth Studies*, 1, 5-22.
- Mackinnon, D.P., & Lockwood, C.M. (2003). Advances in statistical methods for substance abuse prevention research. *Prevention Science*, 4(3), 171.
- Martin Jr., W. E., Swartz-Kulstad, J. L., & Madson, M. (1999). Psychosocial factors that predict the college adjustment of first-year undergraduate students: Implications for college counselors. *Journal of College Counseling*, 2, 121-133.
- Mathis, M., & Lecci, L. (1999). Hardiness and college adjustment: Identifying students in need of services. *Journal of College Student Development*, 40, 305-309.
- Matsushima, R., & Shiomi, K. (2003). Social self-efficacy and interpersonal stress in adolescence. *Social Behavior and Personality*, 31(4), 323-332.
- McFarlane, A.H., Bellissimo, A., Norman, G.R. (1995). Family structure, family functioning and adolescent well-being: The transcendent influence on parental style. *Journal of Child Psychology and Psychiatry*. 36 (5), 58-63.

- Medalie, J. (1981). The college years as a mini-life cycle: Developmental tasks and adaptive options. *JACHA (Journal of the American College Health Association)*, 30(10), 75-79.
- Montgomery, R. L., Haemmerlie, F. M., & Ray, D. M. (2003). Psychological correlates of optimism in college students. *Psychological Reports*, 92, 545-547.
- Montgomery, R. L., & Haemmerlie, F. M. (1993). Undergraduate adjustment to college. drinking behavior, and fraternity membership. *Psychological Reports*, 73, 801-802.
- Mooney, S. P., Sherman, M. F., & Lo Presto, C. T. (1991). Academic locus of control, self-esteem, and perceived distance from home as predictors of college adjustment. *Journal of Counseling & Development*, 69, 445-448.
- Muthén, L. K., & Muthén, B.O. (2007). *Mplus user's guide* (5th Ed.). Los Angeles, CA: Muthén & Muthén.
- National Center for Education Statistics. (NCES, 2009). Retrieved October 11, 2009 from <http://nces.ed.gov/>.
- National Advisory Committee on Rural Health. (1993). *Sixth annual report on rural health*. Rockville, MD: U.S. Department of Health and Human Services.
- Newby-Fraser, E., & Schlebusch, L. (1997). Social support, self-efficacy and assertiveness as mediators of student stress. *Psychology: A Journal of Human Behavior*, 34, 61-69.
- Nora, A., Cabrera, A., Hagedorn, L.S., & Pascarella, E. (1996). Differential impacts of academic and social experiences on college-related behavioral outcomes across

different ethnic and gender groups at four-year institutions. *Research in Higher Education*, 37(4), 427-451.

Nordal, K. C., Copans, S. A., & Stamm, B. H. (2003). Children and adolescents in rural and frontier areas. In B. H. Stamm (Ed.), *Rural behavioral health care: An interdisciplinary guide* (pp. 159-170). Washington, DC: American Psychological Association.

Oberg, K. (1960). Culture shock: Adjustment to new cultural environments. *Practical Anthropology*, 7, 177-182.

Oliver, M. L., Rodriguez, C. J., & Mickelson, R. A. (1985). Brown and black in white: The social adjustment and academic performance of chicano and black students in a predominantly white university. *Urban Review*, 17, 3-24.

Ostrove, J. M., & Long, S. M. (2007). Social class and belonging: Implications for college adjustment. *Review of Higher Education: Journal of the Association for the Study of Higher Education*, 30(4), 363-389.

Pang, V., & Cheng, L. (1998). The quest for concepts, competence, and connections: The education of Asian Pacific American children. In Pang, V. & Cheng, L. (eds.), *Struggling to Be Heard: The Unmet Needs of Asian Pacific American Children* (p. 3-10). Albany: State University of New York Press.

Patterson, R.M., & O'Brien, K.M. (1997, August). An analysis of social self-efficacy in college students: A test of theory and implications for counseling. Paper presented at the 105<sup>th</sup> annual convention of the American Psychological Association, Chicago.

- Paul, E. L., & Brier, S. (2001). Friendsickness in the transition to college: Precollege predictors and college adjustment correlates. *Journal of Counseling & Development*, 79, 77-89.
- Pescosolido, B.A., & Boyer, C. A. (1999). How do people come to use mental health services? Current knowledge and changing perspectives. In A. V. Horwitz & T. L. Scheid (Eds.), *A handbook for the study of mental health: Social context, theories and systems* (p. 392-411). London: Cambridge University Press.
- Phinney, J. S., & Haas, K. (2003). The process of coping among ethnic minority first-generation college freshmen: A narrative approach. *Journal of Social Psychology*, 143(6), 707-726.
- Pike, G. R., & Kuh, G. D. (2005). First- and second-generation college students: A comparison of their engagement and intellectual development. *Journal of Higher Education*, 76, 276-300.
- Pittman, L. D., & Richmond, A. (2007). Academic and psychological functioning in late adolescence: The importance of school belonging. *Journal of Experimental Education*, 75, 270-290.
- Pizzolato, J. E. (2004). Coping with conflict: Self-authorship, coping, and adaptation to college in first-year, high-risk students. *Journal of College Student Development*, 45, 425-442.

- Postsecondary Education Opportunity. (2010). Retrieved April 9, 2010 from <http://www.postsecondary.org>.
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments, & Computers*, 36, 717-731.
- Pritchard, M. E., Wilson, G. S., & Yamnitz, B. (2007). What predicts adjustment among college students? A longitudinal panel study. *Journal of American College Health*, 56, 15-21.
- Raykov, T., & Marcoulides, G.A. (2006). A first course in structural equation modeling. London: Psychology Press.
- Rendon, L.I., Jalomo, R.E., & Nora, A. (2000). Theoretical considerations in the study of minority student retention in higher education. In J.M. Braxton (Ed.), *Reworking the student departure puzzle* (pp. 127-156). Nashville, TN: Vanderbilt University Press.
- Rice, K. G., & Lapsley, D. K. (2001). Perfectionism, coping, and emotional adjustment. *Journal of College Student Development*, 42, 157-168.
- Richards, E. (2010, 10 May). State audit finds shortage of guidance counselors at MPS. *Milwaukee-Wisconsin Journal Sentinel*. Retrieved May 4, 2011 from <http://www.jsonline.com/new/education/93357104.html>.
- Robitschek, C., & Keyes, C. L. M. (2009). The structure of Keyes' model of mental health and the role of personal growth initiative as a parsimonious predictor. *Journal of Counseling Psychology*, 56, 321-329.



- Ross, S. E., Niebling, B. C., & Heckert, T. M. (1999). Sources of stress among college students. *College Student Journal*, 33, 312-317.
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General & Applied*, 80, 1-28.
- Rueter, M. A., Holm, K. E., Burzette, R., Kim, K. J., & Conger, R. D. (2007). Mental health of rural young adults: Prevalence of psychiatric disorders, comorbidity, and service utilization. *Community Mental Health Journal*, 43, 229-249.
- Rughani, J., Deane, F.P., & Wilson, C.J. (2011). Rural adolescents' help-seeking intentions for emotional problems: The influence of perceived benefits and stoicism. *Australian Journal of Rural Health*, 9(2), 64-69.
- Russell, S., & Elder, G. H. J. (1997). Academic success in rural America: Family background and community integration. *Childhood: A Global Journal of Child Research*, 4, 169-181.
- Rutter, M. (1987). Psychosocial resilience and protective mechanisms. *American Journal of Orthopsychiatry*, 57, 316-331.
- Ryff C. (1989) Happiness is everything, or is it?. Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*. 57, 1069-1081. doi: 10.1037/0022-3514.57.6.1069
- Ryff, C.D., & Keyes, C.L. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology*, 69(4), 719-727.
- Ryff, C.D. & Singer, B.H. (2006). Know thyself and become what you are: A eudaimonic approach to psychological wellbeing. *Journal of Happiness Studies*, 9, 13-39.

- Sasaki, M., & Yamasaki, K. (2007). Stress coping and the adjustment process among university freshmen. *Counselling Psychology Quarterly*, 20, 51-67.
- Schultz, C. G., & Neighbors, C. (2007). Perceived norms and alcohol consumption: Differences between college students from rural and urban high schools. *Journal of American College Health*, 56, 261-265.
- Sears, H.A. (2004). Adolescents in rural communities seeking help: Who reports problems and who sees professionals? *Journal of Child Psychology and Psychiatry*, 45(2), 396-404.
- Sears, S. F., Evans, G. D., & Kuper, B. D. (2003). Rural social service systems as behavioral health delivery systems. In B. H. Stamm (Ed.), *Rural behavioral health care: An interdisciplinary guide* (pp. 109-120). Washington, DC: American Psychological Association.
- Sennett, J., Finchilescu, G., Gibson, K. & Strauss, R. (2003). Adjustment of Black students at a historically White South African university. *Educational Psychology*, 23(1), 107-116.
- Sherer, M., Maddux, J.E., Mercandante, B., Prentice-Dunn, S., Jacobs, B., & Rogers, R.W. (1982). The self-efficacy scale: Construction and validation. *Psychological Reports*, 51, 663-671.
- Sheridan, S. (1995). *The tough kids social skills book*. Longmont, CO: Sopris West.
- Silverthorn, N. A., & Gekoski, W. L. (1995). Social desirability effects of measures of adjustment to university, independence from parents. *Journal of Clinical Psychology*, 51, 244-251.

- Slama, K.M. (2004). Rural culture is a diversity issue. *Minnesota Psychologist*, January 2004, 9-13.
- Smith, H. M. & Betz, N.E. (2000). Development and validation of a scale of perceived social self-efficacy. *Journal of Career Assessment*, 8, 283-301.
- Smith, H.M. & Betz, N.E. (2002). An examination of efficacy and esteem pathways to depression in youth adulthood. *Journal of Counseling Psychology*, 49(4), 438-448. doi: 10-1037//0022-0167.49.4.438.
- Smith, W.L., & Zhang, P. (2009). Students' perceptions and experiences with key factors during the transition from high school to college. *College Student Journal*, 42(2), 643-357.
- Stern, G. G. (1970). *People in context*. New York: Wiley.
- Sue, S., Zane, N., & Young, K. (1994). Research on psychotherapy with culturally diverse populations. In A. E. Bergin, & S. L. Garfield (Eds.), *Handbook of psychotherapy and behavior change (4th ed.)*. (pp. 783-817). Oxford, England: John Wiley & Sons.
- Theriault, S. W., & Holmberg, D. (1998). The new old-fashioned girl: Effects of gender and social desirability on reported gender-role ideology. *Sex Roles*, 39, 97-112.
- Thompson, B. (2000). Ten commandments of structural equation modeling. In L.G. Grimm & P.R. Yarnold (Eds.), *Reading and understanding more multivariate statistics*, (pp. 261-283). Washington, DC: American Psychological Association.

- Tierney, W.G. (2000). Power, identity, and the dilemma of college student departure. In J.M. Braxton (Ed.), *Reworking the student departure puzzle*. Nashville: Vanderbilt University Press.
- Tinto, V. (1987). *Leaving college: Rethinking the causes and cures of student attrition*. Chicago: The University of Chicago Press.
- Toews, M. L., & Yazedjian, A. (2007). College adjustment among freshmen: Predictors for white and hispanic males and females. *College Student Journal*, 41, 891-900.
- Tognoli, J. (2003). Leaving home: Homesickness, place attachment, and transition among residential college students. *Journal of College Student Psychotherapy*, 18, 35-48.
- Trockel, M. T., Barnes, M. D., & Egget, D. L. (2000). Health-related variables and academic performance among first-year college students: Implications for sleep and other behaviors. *Journal of American College Health*, 49, 125-131.
- United States Census Bureau. (2010). Retrieved April 1, 2010 from <http://www.census.gov/>.
- United States Department of Agriculture. (2004). Measuring rurality: Rural-urban continuum codes. Retrieved May 11, 2010 from <http://www.ers.usda.gov/Briefing/Rurality/RuralUrbCon/>.
- U.S. Department of Health and Human Services. (1999). *Mental Health: A Report of the Surgeon General—Executive Summary*. Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration,

Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health.

University of Nebraska-Lincoln. (2009). Retrieved June 8, 2011 from  
<http://www.unl.edu/learncom/>.

Vogel, D. L., Wade, N. G., & Hackler, A. H. (2007). Perceived public stigma and the willingness to seek counseling: The mediating roles of self-stigma and attitudes toward counseling. *Journal of Counseling Psychology, 54*, 40-50.

Vogel, D. L. & Wester, S. R. (2003). To seek help or not to seek help: The risks of self-disclosure. *Journal of Counseling Psychology, 50*, 351-361.

Vogel, D. L., Wester, S. R., Wei, M., & Boysen, G. A. (2005). The role of outcome expectations and attitudes on decisions to seek professional help. *Journal of Counseling Psychology, 52*, 459-470.

Wagonfeld, M. O. (2003). A snapshot of rural and frontier America. In B. H. Stamm (Ed.), *Rural behavioral health care: An interdisciplinary guide*. Washington, DC: American Psychological Association.

Wei, M., Russell, D. W., & Zakalik, R. A. (2005). Adult attachment, social self-efficacy, self-disclosure, loneliness, and subsequent depression for freshmen college students: A longitudinal study. *Journal of Counseling Psychology, 52*, 602-614.

Wells, R. (2008). Social and cultural capital, race, ethnicity, and college student retention. *Journal of College Student Retention, 10*, 103-128.

- Wiborg, A. (2001). Education, mobility and ambivalence. rural students in higher education. *Young*, 9, 23-40.
- Wilson, J. M., & Donnermeyer, J. F. (2006). Urbanity, rurality, and adolescent substance use. *Criminal Justice Review*, 31, 337-356.
- Wilson, S.B., Mason, T.W., & Ewing, M.J.M. (1997). Evaluating the impact of receiving university-based counseling services on student retention. *Journal of Counseling Psychology*, 44(3), 316-320.
- Wintre, M. G., & Sugar, L. A. (2000). Relationships with parents, personality, and the university transition. *Journal of College Student Development*, 41, 202-214.
- Wintre, M. G., & Yaffe, M. (2000). First-year students' adjustment to university life as a function of relationships with parents. *Journal of Adolescent Research*, 15, 9.
- Woods, M. (2005). *Rural geography*. Thousand Oaks, CA: Sage.
- Woodward, J. C., & Frank, B. D. (1988). Rural adolescent loneliness and coping strategies. *Adolescence*, 23, 559-565.
- Woodward, J. C., & Kalyan-Masih, V. (1990). Loneliness, coping strategies and cognitive styles of the gifted rural adolescent. *Adolescence*, 25, 977.
- Wright, J. J. (1967). Reported personal stress sources and adjustment of entering freshmen. *Journal of Counseling Psychology*, 14, 371-373.
- Zimbelman, K. (1987). Locus of control and achievement orientation in rural and metropolitan youth: Brief report. *Journal of Rural Community Psychology*, 8, 50-55.

Zimet, G.D, Dahlem, S.S., Zimet, S.G., & Farley G.K. (1988). The multidimensional scale of perceived social support. *Journal of Personality Assessment*, 52(1), 30-41.

Table i  
*Comparison of social variables*

Variable	Definition	Unique qualities
Social support	“perceived instrumental and/or expressive provisions supplied by friends, family, or a significant other”	<b><i>Broad perception of support</i></b> (across contexts); focuses on support from specified sources
Social well-being	“quality of relationships with others and the community”	<b><i>Quality of relationships</i></b> , including with the <b><i>community</i></b> , in general
Social self-efficacy	“Individual’s confidence in her/his ability to engage in the social interactional tasks necessary to initiate and maintain interpersonal relationships”	<b><i>Confidence/prediction of success</i></b> in social ability, across contexts
Social investment	“time available and motivation to initiate and maintain social ties at college”	Measures <b><i>potential barriers to social investment</i></b> at college (e.g., family/community obligations, # of trips home per semester); measures <b><i>motivation</i></b> to create a new social network at college
Social adjustment to college (SACQ)	Adaptation to other people in the college environment, (lack of) feelings of nostalgia for past times or homesickness	College-specific; <b><i>self-assessment of social performance</i></b>



Table 1

*Means and standard deviations*

Variable	Mean	StD
Adjustment (SACQ)	465.16	68.74
Social support	68.49	11.54
Social self-efficacy	85.62	18.91
Barriers to soc. inv.	20.57	4.21
Help-seeking attitudes	5.52	3.38
Well-being	52.15	10.96
Rurality	5.52	3.38

Table 2

*Pearson's correlations, constructs of interest*

Variable	1	2	3	4	5	6
1. Adjustment (SACQ)	--	.38**	.42 **	-.09	-.03	.56 **
2. Social support	.38 **	--	.40 **	.20**	-.01	.55 **
3. Soc. self-efficacy	.42 **	.40**	--	.009	.01	.58 **
4. Barriers to soc. inv.	-.09	.20**	.009	--	.03	.13 *
5. Help-seeking	-.03	-.01	.01	.03	--	-.01
6. Well-being	.56**	.55 **	.58 **	.13 *	-.01	--

\*\* &lt;.01, \* &lt;.05

Table 3

*Pearson's correlations, subjective and objective ratings of rurality*

Variable	1	2	3
1. 1-100 rating of rurality		.67**	.61**
2. Yes/no assessment of rurality	.67**		.67**
3. Objective rurality measure	.61**	.67**	

\*\* &lt;.01, \* &lt;.05

Table 4  
*Pearson's correlations, rurality and constructs of interest*

Variable	Adjustment	Social support	Soc. Self-Efficacy	Barriers	Help-seeking	Well-being
Rurality	.005	-.09	-.10	-.002	.221**	-.129*

\*\* <.01, \* <.05

Table 5  
*Independent samples t-tests, rural and urban participants on constructs of interest*

Variable	Rural Mean (sd)	Urban Mean (sd)	T (df)	p
Adjustment (Full)	465.80 (65.26)	464.76 (72.85)	.12 (234)	.91
Academic adjustment	139.65 (22.61)	144.56 (22.32)	.168 (234)	.095
Social adjustment	131.97 (23.21)	128.10 (26.19)	1.20 (234)	.23
Emotional adjustment	86.15 (18.31)	87.18 (17.67)	.44 (234)	.66
Institutional adjustment	108.04 (17.16)	104.93 (19.76)	1.29 (234)	.20
Social support	69.17 (11.82)	67.77 (11.27)	.93 (234)	.35
Soc. self-efficacy	87.40 (18.55)	83.83 (19.25)	1.45 (235)	.15
Barriers to soc. inv.	20.50 (4.20)	20.67 (4.24)	.30 (235)	.76
Help-seeking	11.63 (5.16)	14.23 (5.53)	3.74 (235)	<.001
Well-being	53.22 (11.34)	50.86 (10.48)	1.663 (235)	.10

Table 6  
*Multiple regression model of college adjustment with all participants (n=235)*

Variable	r with Adjustment (p)	b	Beta (p)
Well-being	.54 (<.001)	2.90	.46 (<.001)
Social support	.38 (<.001)	.74	.12 (.05)
Barriers to soc. inv.	-.09 (.16)	-2.97	-.18 (.001)
Soc. self-efficacy	.42 (<.001)	.44	.12 (.06)
Help-seeking attitude	-.03 (.68)	-.52	-.04 (.44)
Rurality	.005 (.93)	1.90	.09 (.08)

Table 7  
*Multiple regression model of college adjustment for rural participants (n=123)*

Variable	r with Adjustment (p)	b	Beta (p)
Well-being	.56 (<.001)	2.328	.40 (<.001)
Social support	.39 (<.001)	1.10	.20 (.02)
Barriers to soc. inv.	-.18 (.049)	-3.95	-.25 (.001)
Soc. self-efficacy	.44 (.001)	.417	.12 (.20)
Help-seeking attitude	.02 (.83)	-0.22	-.018 (.81)

Table 8:  
*Multiple regression model of college adjustment for urban participants (n= 114)*

Variable	r with Adjustment (p)	b	Beta (p)
Well-being	.56 (<.001)	3.57	.51 (<.001)
Social support	.37 (<.001)	.238	.04 (.71)
Barriers to soc. inv.	-.01 (.89)	-2.20	-.13 (.11)
Soc. self-efficacy	.41 (<.001)	.504	.133 (.16)
Help-seeking attitude	-.06 (.51)	-.877	-.066 (.40)

Table 9  
*Significant contributors to rural and urban college adjustment regression models*

Variable	Rural	Urban
Well-being	NO	NO
Social support	YES	YES
<b>Barriers to soc. inv.</b>	<b>YES</b>	<b>NO</b>
Social self-efficacy	NO	NO
Help-seeking attitude	NO	NO

Table 10  
*Standardized direct and mediation effects on adjustment, full model*

Variable	Direct effect (p)	Mediation effect (through well-being)
Social support	.12 (.049)	.17 (<.001)
Social self-efficacy	.12 (.055)	.20 (<.001)
Barriers to social inv.	-.18 (.001)	.02 (.28)

Table 11  
*Standardized direct and mediation effects on adjustment, multigroup model*

Variable	Direct effect (p)	Mediation effect (through well-being)
Rural		
Social support	.20 (.02)	.15 (.001)
Social self-efficacy	.12 (.20)	.20 (.001)
Urban		
Social support	.04 (.67)	.22 (<.001)
Social self-efficacy	.13 (.17)	.17 (.001)

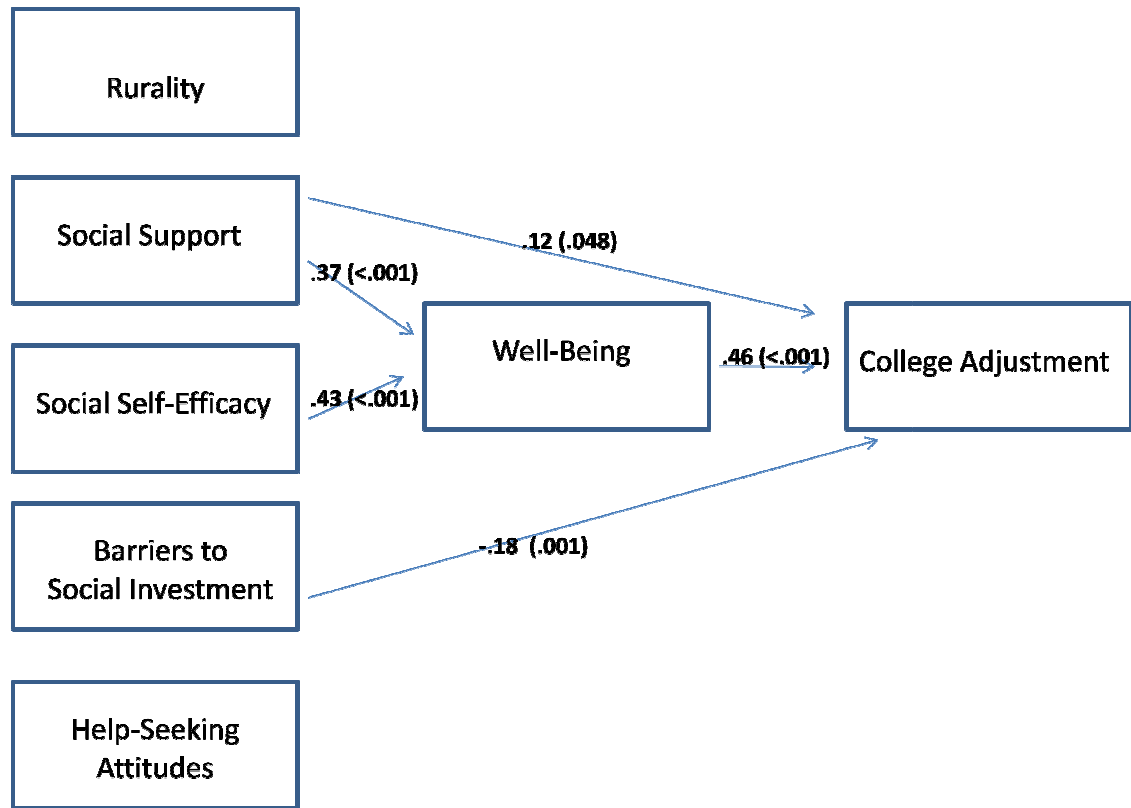


Figure 1: Iteration 2, non-significant paths removed, standardized values

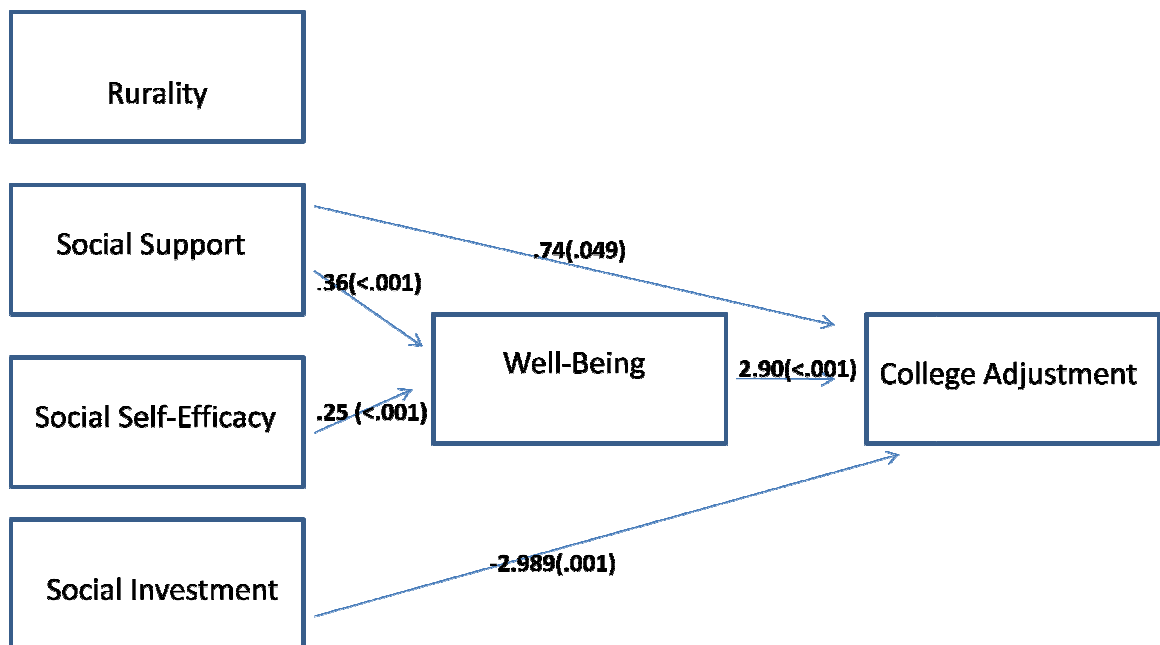


Figure 2: Iteration 4, non-significant paths removed, standardized values

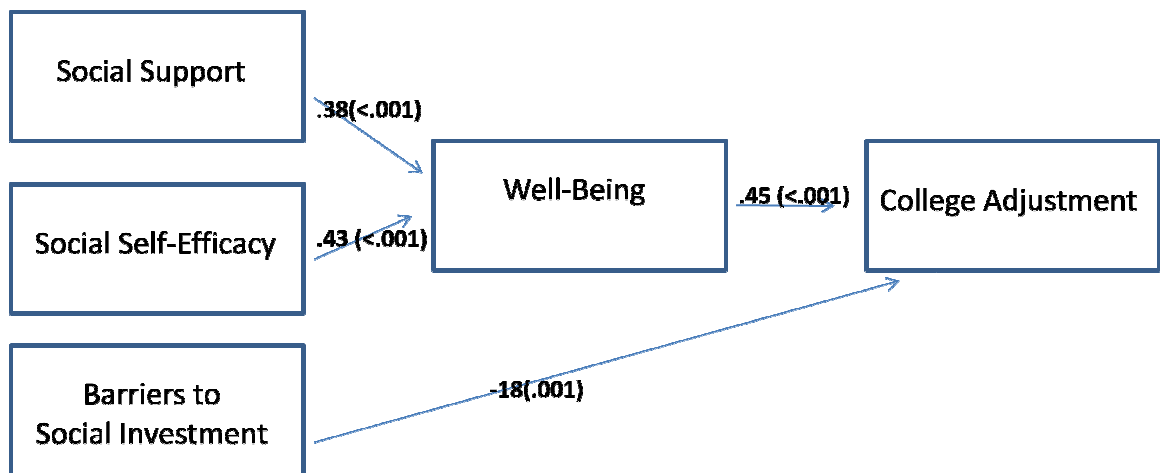


Figure 3: Iteration 6, most parsimonious model, non-significant paths removed, standardized values

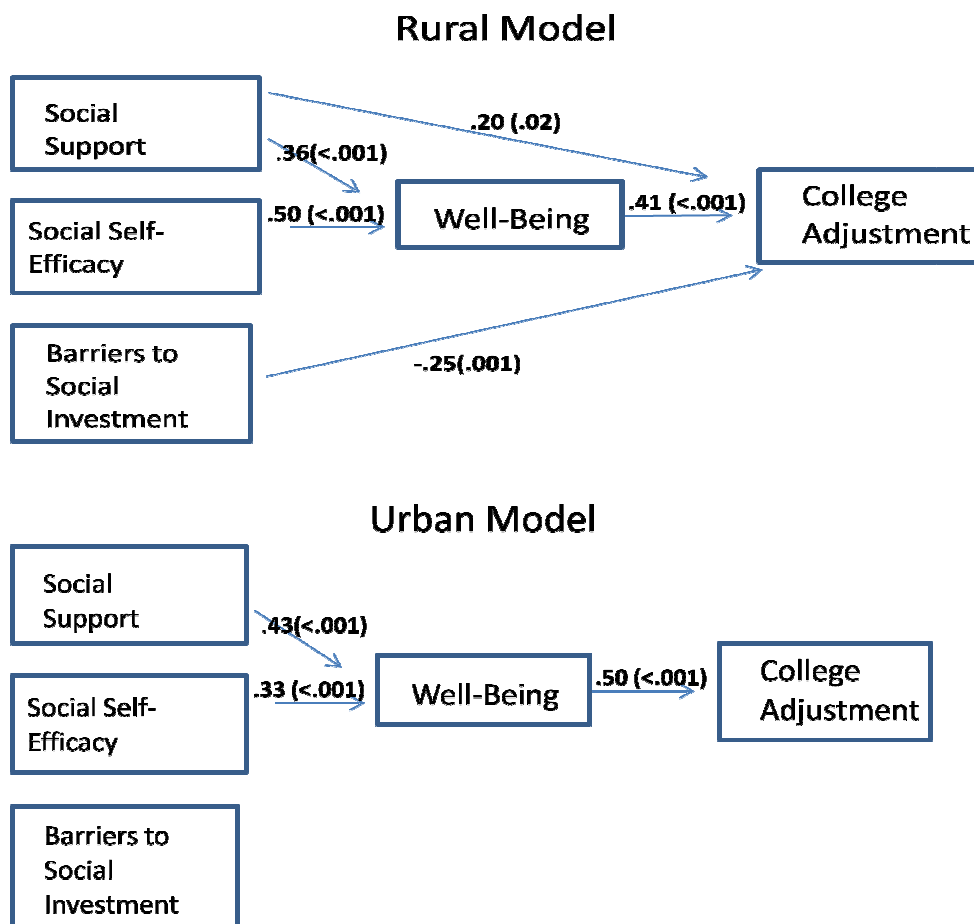


Figure 4: Multigroup SEM comparison, non-significant paths removed, standardized values

## Appendix A: Informed consent document

### ***INFORMED ASSENT FORM*** **College Adjustment Research Project**

#### ***Purpose of the Research***

This research project seeks to gather information on first-year college student adjustment, including student beliefs, attitudes, and attributes that may be related to college adjustment. We are inviting you to participate in this study because you are a first-year college student.

#### ***Procedures***

The study involves filling out a survey. The first two pages ask for general information about you, such as age, race/ethnicity, and hometown. Some questions about your family of origin (e.g., your mother's and father's occupation) will also be asked. The rest of the survey focuses on perceptions of yourself, as assessed by scales on college adjustment, help-seeking attitudes, social self-efficacy, social investment at college, and social support. The survey will take approximately 20-25 minutes to complete.

#### ***Risks and/or Discomforts***

There are no known risks or discomforts associated with this study.

#### ***Benefits***

Information gained from this study may be used in the future to help students like you adjust to college.

#### ***Confidentiality***

Any information collected during this study will be kept strictly confidential. Personal identifiers will not be collected on the questionnaires; thus there will be no way to link your identity to your responses. All surveys will be kept in a locked file cabinet separate from the assent documents to further ensure confidentiality. The information obtained in this study may be published in scientific journals or presented at scientific meetings, but only aggregate statistics will be used.

#### ***Compensation***

You will receive no direct monetary compensation for participating in this study. As an invited study participant, you will be able to register for a drawing for gift certificates or participate in a competition for a pizza party for a student group that you are a part of (the student group who gets the most questionnaires completed earns the pizza party).

#### ***Opportunity to Ask Questions***

You may ask any questions concerning this research and have those questions answered before agreeing to participate in or during the study. Or you may contact Allison, office phone (402) 472-6210, or [abitz@unlnotes.unl.edu](mailto:abitz@unlnotes.unl.edu). If you have questions concerning

your rights as a research participant that have not been answered by the researchers or to report any concerns about the study, you may contact the University of Nebraska-Lincoln Institutional Review Board, telephone (402) 472-6965.

***Freedom to Withdraw***

You are free to decide not to participate in this study or to withdraw at any time without adversely affecting your relationship with the investigators or with the University of Nebraska-Lincoln. Your decision will not result in any loss or benefits to which you are otherwise entitled.

***Consent, Right to Receive a Copy***

You are voluntarily making a decision whether or not to participate in this research study. Completion of the following questionnaire certifies that you have decided to participate having read and understood the information presented in this document. You have the right to receive a copy of this assent form for your own records.

***Investigator Contact Information***

***Allison L. Bitz, M.A.    Principal Investigator***  
***Michael Scheel, PhD    Secondary Investigator***

***Office: (402) 472-6210***  
***Office: (402) 472-0573***